International investments skyrocket 43%

By Margaret Price

Assets invested overseas by defined benefit plans in *Pensions & Investments*' 200 largest employee benefit funds soared in the 12 months ended Sept. 30 amid a combination of new and increased outlays by funds and hefty market appreciation.

In all, funds' foreign holdings surged almost 43% to $39.359 billion. Of this figure, the $32.738 billion in equities represented a whopping 56% rise from 1988's level, while foreign bond holdings only increased 4.5%.

In foreign equities, market appreciation significantly benefited funds. The Morgan Stanley Capital International Europe Australia Far East Index climbed 22.6% during the 12-month period. Adjusted for that boon, the Top 200 foreign equities total rose 27.2%.

Overseas bond holdings dropped a hair when adjusted for the Salomon Brothers World Government Bond Index's 6.5% rise in dollar terms during the period.

In addition, many of the largest funds increased their international allocation, in some cases to meet targets or expand their investing horizons beyond traditional styles and/or markets.

Many — but not all — first-time foreign investors were public funds, such as the behemoth California Public Employees' Retirement System. Plunging into overseas investing during 1989, that $54 billion fund by Sept. 30 catapulted to become the second largest foreign investor among U.S. funds, with a $2.7 billion overseas allocation. By mid-December that total had climbed to slightly more than $3 billion.

During the 12 months ended Sept. 30, at least six of the Top 200 pension funds made initial foreign investments, including Wisconsin State Board, with its $705 million commitment; Los Angeles Fire & Police Pension System fund, $155 million; Maine State Retirement System, $85 million; New York State & Local Retirement Systems, $83 million; and the Annuity Board of the Southern Baptist Convention, $38 million.

"International has become the most frequently appointed asset class by U.S. pension funds," noted Christopher A. Nowakowski, president of InterSec Research Corp., Stamford, Conn. Their "higher comfort level with international investing, combined with the introduction of new and intriguing products, means they're not (still) clawing money back," he said. In 1989, "for the first time in three or four years the amount that pension funds" reclaimed "was well below the historic trend."

In 1989, pension funds found a variety of attractions overseas — from major markets to emerging ones, and even to foreign real estate, venture capital and leveraged buy-out opportunities. Pension funds that invested in the MMG Patricof European Buy-In Fund included the Massachusetts Pension Reserves Investment Management Board, Union Carbide Corp., Textron Inc., Eastman Kodak Co., IBM Corp., General Motors Corp. and American Telephone & Telegraph Co.

The $1.194 billion defined benefit fund of CIGNA Corp., Hartford, Conn., was among the funds that lifted its foreign equities allocation. While CIGNA's overseas equity holdings rose about $34 million in the 12 months, some $25 million of that represented new allocations while the remainder came from market appreciation. George Trumbull, CIGNA's executive vice president and chief investment officer, said the company had been bullish on both the U.S. and European stock markets, a sentiment that prompted the fund to raise its allocations to some European markets as well as the U.S. market.

Given its concern about valuations in the Japanese stock market, the $566 million defined benefit pension fund of Motorola Inc., Schaumburg, Ill., is holding to its 5% international exposure, which is down from 10% in 1985 and 1986, noted Garth Milne, vice president and treasurer. "We pulled a lot of money out of stock markets worldwide in 1987 before the markets crashed," he said. The fund since has increased its allocations to the U.S. market,

See **Foreign** *on page 66*

Profile statistics at a glance

($ billions)

	1989	1988
Top 1,000 assets	1,874.8	1,585.8
Top 200 assets	1,434.6	1,202.4
Top 100 assets	1,202.3	1,004.1
Top 50 assets	943.9	791.8
Top 25 assets	694.1	581.9
Top 200 defined benefit	1,164.0	972.8
Top 200 defined contribution	265.3	229.6
Top 200 profit sharing	14.5	11.8
Top 200 401(k)/thrift	85.2	80.9

Top 200 defined benefit

	1989	1988
Internal management*	490.8	426.7
Internally managed equities	173.5	139.6
Internally managed fixed income	224.4	198.8
Internally managed short-term	39.6	37.7
Internally managed real estate equity	17.1	na**
Internally managed other	22.9	31.9
Equity index funds	155.2	114.3
Internally managed indexed equities	69.2	41.3
Bond index funds	55.4	40.8
Internally managed indexed bonds	16.4	2.3
Real estate equity	43.7	35.3
Mortgages	16.7	18.8
Mortgage-backed securities	60.7	50.0
GICs/BICs	3.9	8.0
Overseas	39.4	27.6
Overseas equity	32.7	21.0
Overseas fixed income	6.1	5.8
Overseas other	0.6	0.8
Venture capital	4.4	3.9
Dedicated/immunized bonds	34.1	26.4
Oil & gas	0.8	0.7
LBOs	4.5	3.5
Private placements	10.5	11.3
Contributions paid	30.7	39.2
Benefits paid	41.1	42.0

Top 200 defined contribution

	1989
Internal management*	119.5
Internally managed equities	43.6
Internally managed fixed income	51.1
Internally managed short-term	13.6
Internally managed real estate equity	3.1
Internally managed other	7.4
Equity index funds	32.5
Internally managed indexed equities	27.0
Bond index funds	0.3
Internally managed indexed bonds	0.0
Real estate equity	3.7
Mortgages	18.1
Mortgage-backed securities	2.4
GICs/BICs	36.0
Overseas	5.3
Overseas equity	5.1
Overseas fixed income	0.2
Overseas other	0.0
Venture capital	0.3
Dedicated/immunized bonds	0.3
Oil & gas	0.2
LBOs	0.7
Private placements	10.0
Contributions paid	9.2

*Total is greater because some funds did not provide a break-out.

**Internally managed real estate equity figure was included in "other" in 1988.

How information was gathered

The information on employee benefit funds contained in this special report was compiled in several steps.

Questionnaires were sent to more than 1,400 funds in *Pensions & Investments*' data base. The largest 200 and largest 1,000 were identified from the completed questionnaires, follow-up telephone calls and a cross-check with information supplied by Money Market Directories Inc., Charlottesville, Va., publisher of the 1990 Money Market Directory of Pension Funds and Their Investment Managers.

The more detailed information contained in the profiles of the Top 200 employee benefit funds was obtained from the completed questionnaires and from interviews with fund officials by the editorial staff of *P&I*.

Where no information was available from the fund, asset figures were taken from the 1990 Money Market Directory.

Unless otherwise noted, the data reflect fund operations as of Sept. 30, 1989.

In cases where the fund supplied data considered too old, *P&I* estimated the asset growth based on one of the following methods: the most recent asset mix supplied by the fund; the asset mix reported in the 1990 Money Market Directory; or *P&I's* reported average asset mix for that particular type of fund, i.e. union, corporate or public. In some cases, the estimates were based on asset totals reported in the sponsor's most recent annual report.

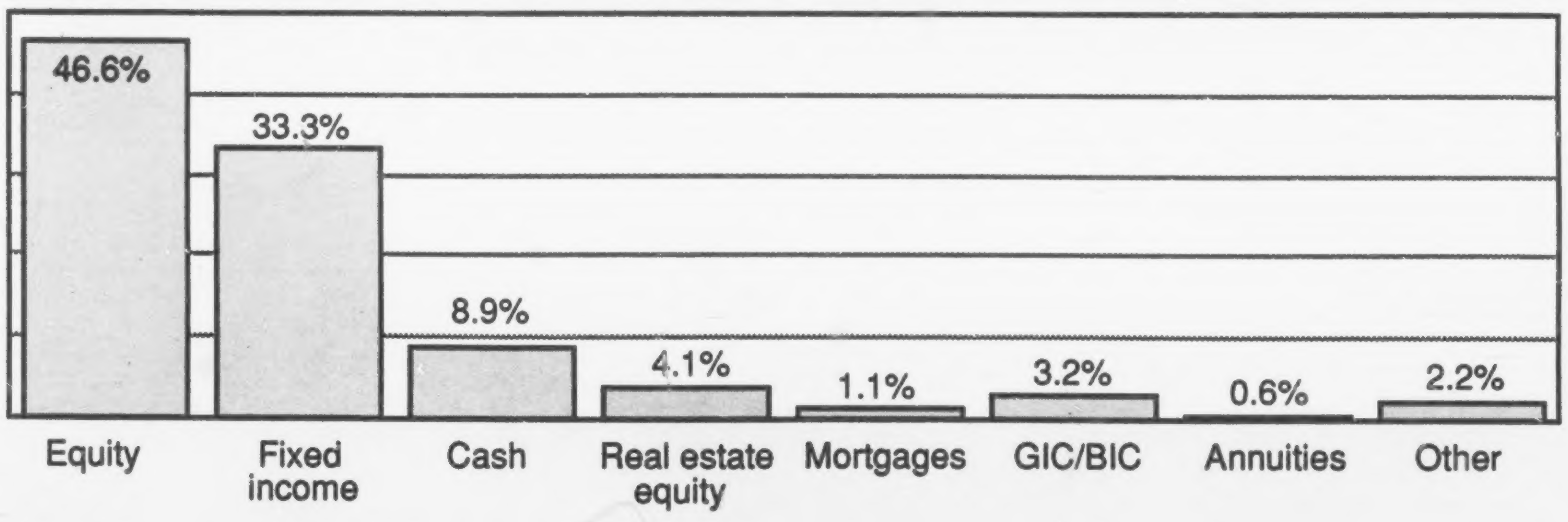
In the tables accompanying the profiles, all dollar amounts are rounded to the nearest million.

The asset mixes for the Top 200 and Bottom 800 funds represent the average of all reported allocations for the respective funds. The separate asset mixes for the components of the Top 200 and Bottom 800 universes — corporate, public and union funds — were compiled in the same manner.

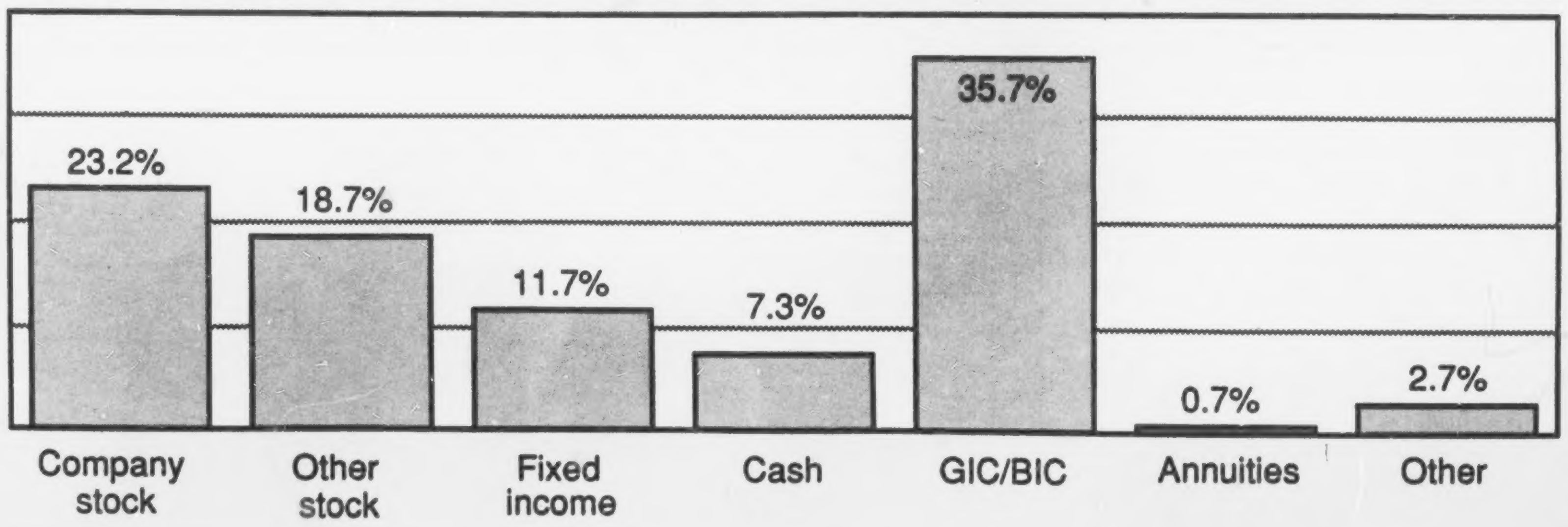
This is the 11th consecutive year *P&I* has ranked the nation's 1,000 largest employee benefit funds and the ninth year separate listings have appeared for the Top 200. ■

Top 1,000 aggregate asset mix

Defined benefit



Defined contribution



Top 200 pension funds/sponsors

Assets in $ millions

1.	TIAA-CREF	81,000
2.	California Public Employees	54,000
3.	New York City	45,422
4.	New York State & Local	44,238
5.	AT&T	42,700
6.	General Motors	40,900
7.	California State Teachers	30,335
8.	General Electric	28,912
9.	New York State Teachers	28,130
10.	IBM	25,775
11.	N.J. Division of Investment	24,526
12.	Texas Teachers	23,500
13.	Ford Motor	22,800
14.	Wisconsin State Board	20,033
15.	Ohio Public Employees	19,305
16.	Florida State Board	18,700
17.	E.I. du Pont de Nemours	18,681
18.	Ohio State Teachers	18,059
19.	Michigan Retirement Systems	17,948
20.	North Carolina	16,791
21.	NYNEX	16,062
22.	Pennsylvania Public Schools	15,430
23.	Ameritech	14,300
24.	Bell Atlantic	13,635
25.	University of California	12,900
26.	BellSouth	12,843
27.	Washington State Board	12,660
28.	GTE	12,423
29.	Minnesota State Board	12,343
30.	Pacific Telesis	11,443
31.	Oregon Public Employes	11,178
32.	Maryland State Retirement	11,065
33.	Boeing	11,001
34.	Virginia Supplemental	10,244
35.	Teamsters, Central States	9,849
36.	USX	9,825
37.	U S WEST	9,800
38.	Pennsylvania State Employes	9,504
39.	Eastman Kodak	9,500
40.	Los Angeles County	9,359
41.	Colorado Public Employees	9,227
42.	Rockwell International	9,124
43.	Teamsters, Western Conference	9,084
44.	Lockheed	8,926
45.	Georgia Teachers	8,908
46.	Illinois Teachers	8,475
47.	United Nations Joint Staff	8,414
48.	Southwestern Bell	8,334
49.	United Technologies	8,261
50.	Sears, Roebuck	8,101
51.	Tennessee Consolidated	8,075
52.	Exxon	8,066
53.	Connecticut Trust Funds	7,996
54.	Alabama Retirement Systems	7,884
55.	Shell Oil	7,840
56.	Arizona State Retirement	7,612
57.	McDonnell Douglas	7,589
58.	Philip Morris	7,470
59.	South Carolina Retirement	7,072
60.	Chevron	7,069
61.	Allied-Signal	7,000
62.	Massachusetts Teachers/Employees	6,650
63.	Hughes Aircraft	6,572
64.	Prudential Insurance	6,042
65.	General Dynamics	6,000
66.	Texas Employees	5,969
67.	Westinghouse Electric	5,828
68.	Chrysler	5,467
69.	Missouri Public Schools	5,328
70.	UMWA	5,300
71.	Unisys	5,022
72.	Procter & Gamble	4,970
73.	Iowa Public Employees	4,900
74.	Caterpillar	4,779
75.	Amoco	4,581
76.	Mobil Oil	4,560
77.	Illinois Municipal	4,326
78.	Federal Retirement Thrift	4,319
79.	Monsanto	4,300
80.	Pacific Gas & Electric	4,259
81.	Mississippi Public Employees	4,129
82.	Alaska Retirement Systems	4,124
83.	RJR Nabisco	4,100
84.	Hawaii State Employees	4,051
85.	Delta Air Lines	4,050
86.	American Airlines	4,000
87.	San Francisco City/County	3,916
88.	Utah State Retirement	3,908
89.	Illinois State Universities	3,845
90.	United Airlines	3,700
91.	Kansas Public Employees	3,692
92.	National Electrical Contractors	3,675
93.	Northrop	3,623
94.	Detroit Systems	3,587
95.	United Methodist Church	3,566
96.	Atlantic Richfield	3,541
97.	Chicago Teachers	3,502
98.	Minnesota Mining & Mfg.	3,490
99.	Los Angeles Fire & Police	3,477
100.	Kentucky Teachers	3,461
101.	Georgia Employees	3,458
102.	Xerox	3,405
103.	Metropolitan Life	3,393
104.	J.C. Penney	3,308
105.	World Bank	3,292
106.	Louisiana Teachers	3,265
107.	Nevada Public Employees	3,236
108.	Martin Marietta	3,201
109.	Aluminum Co. of America	3,200
110.	Kentucky Retirement System	3,200
111.	Texaco	3,200
112.	Illinois State Board	3,173
113.	Grumman	3,170
114.	Bethlehem Steel	3,155
115.	Textron	3,121
116.	Southern	3,100
117.	TRW	3,096
118.	Tennessee Valley Authority	3,090
119.	State Farm Insurance	3,083
120.	Ohio Police & Firemen	3,070
121.	Raytheon	3,050
122.	Consolidated Edison	2,962
123.	Honeywell	2,909
124.	Tenneco	2,877
125.	Indiana Public Employees	2,817
126.	Ohio School Employees	2,817
127.	Massachusetts PRIM	2,791
128.	Deere	2,720
129.	International Paper	2,709
130.	Aetna	2,703
131.	Dow Chemical	2,700
132.	Union Carbide	2,693
133.	Owens-Illinois	2,644
134.	Southern Baptist Convention	2,559
135.	ITT	2,497
136.	Los Angeles City	2,497
137.	Trans World Airlines	2,470
138.	Eli Lilly	2,432
139.	Eastern Airlines	2,410
140.	Presbyterian Church (U.S.A.)	2,400
141.	Southern California Edison	2,380
142.	National Rural Electric Co-op	2,304
143.	Rhode Island Retirement	2,300
144.	Halliburton	2,270
145.	Louisiana State Employees	2,250
146.	Phillips Petroleum	2,250
147.	Hospital/Healthcare Employees	2,241
148.	BP America	2,218
149.	Texas Municipal	2,200
150.	Bakery & Confectionery Union	2,175
151.	Arkansas Teachers	2,166
152.	Commonwealth Edison	2,161
153.	Operating Engineers, Central Fund	2,159
154.	Armco	2,156
155.	Southern California UFCW	2,133
156.	Boilermaker/Blacksmith	2,132
157.	Travelers	2,075
158.	Navistar	2,058
159.	Citicorp	2,056
160.	Inland Steel	2,041
161.	Motorola	2,017
162.	Texas County & District	2,000
163.	Oklahoma Teachers	1,968
164.	FPL Group	1,963
165.	Abbott Laboratories	1,923
166.	Southern New England Telephone	1,912
167.	New Mexico Educational	1,890
168.	American Stores	1,882
169.	PPG Industries	1,880
170.	Chicago Municipal	1,845
171.	Episcopal Church	1,837
172.	United Parcel Service	1,802
173.	Los Angeles Water & Power	1,800
174.	Maine State Retirement	1,800
175.	New Mexico Public Employees	1,800
176.	American Electric Power	1,789
177.	Evangelical Lutheran Church	1,782
178.	CIGNA	1,775
179.	K mart	1,775
180.	Philadelphia City	1,754
181.	Hercules	1,752
182.	New York Life	1,749
183.	Digital Equipment	1,742
184.	GenCorp	1,719
185.	Cooper Industries	1,700
186.	Indiana State Teachers	1,700
187.	Hewlett-Packard	1,699
188.	I.A.M. National Pension	1,695
189.	American Brands	1,684
190.	Chase Manhattan	1,684
191.	Anheuser-Busch	1,670
192.	Teledyne	1,668
193.	Bechtel Power	1,655
194.	Consolidated Natural Gas	1,648
195.	Idaho Public Employees	1,643
196.	Milwaukee City	1,641
197.	Equitable Life	1,639
198.	Bank of America	1,633
199.	Pan Am World Airways	1,621
200.	Plumbers National Headquarters	1,615
	Total	**$1,434,604**

Ranking of funds/sponsors 201-1,000

Assets in $ millions

Rank	Fund/sponsor	Location	Assets
201.	NCR	Dayton, Ohio	1,602
202.	Baltimore Employees	Baltimore	1,600
203.	Chicago Police	Chicago	1,595
204.	Nat'l Sheet Metal Wkrs.	Alexandria, Va.	1,576
205.	Mo. State Employees	Jefferson City	1,574
206.	Delaware State	Dover	1,572
207.	Ralston Purina	St. Louis	1,570
208.	Okla. Public Employees	Oklahoma City	1,552
209.	North American Philips	New York	1,535
210.	Sun	Radnor, Pa.	1,523
211.	Army & Air Force	Dallas	1,516
212.	Arizona Public Safety	Phoenix	1,513
213.	Johnson & Johnson	N. Brunswck, N.J.	1,500
214.	Philadelphia Electric	Philadelphia	1,500
215.	United Telecom.	Kansas City, Mo.	1,497
216.	Texas Instruments	Dallas	1,469
217.	Northwest Airlines	St. Paul, Minn.	1,462
218.	John Hancock	Boston	1,459
219.	Unocal	Los Angeles	1,444
220.	Kaiser Permanente	Oakland, Cal.	1,433
221.	ICMA Retirement	Washington	1,425
222.	Wyoming Retirement	Cheyenne	1,422
223.	American Cyanamid	Wayne, N.J.	1,414
224.	Michigan Municipal	Lansing	1,414
225.	BATUS	Louisville, Ky.	1,400
226.	District of Columbia	Washington	1,400
227.	James River	Richmond, Va.	1,400
228.	Nat'l Auto Dealers	McLean, Va.	1,400
229.	Cook County Empl.	Chicago	1,386
230.	Bristol-Myers	New York	1,382
231.	Federated Dept. Stores	Cincinnati	1,379
232.	Orange County Empl.	Santa Ana, Cal.	1,372
233.	Dun & Bradstreet	New York	1,371
234.	West Virginia State	Charleston	1,370
235.	Champion International	Stamford, Conn.	1,368
236.	Pacific Enterprises	Los Angeles	1,361
237.	Arkansas Employees	Little Rock	1,359
238.	Goodyear Tire & Rubber	Akron, Ohio	1,359
239.	S. Dakota Retirement	Pierre	1,358
240.	Colgate Palmolive	New York	1,354
241.	Litton Industries	Beverly Hills	1,351
242.	Eaton	Cleveland	1,349
243.	Financial Institutions	White Plains, N.J.	1,345
244.	Merck	Rahway, N.J.	1,342
245.	N. Calif. Retail Clerks	Walnut Creek	1,338
246.	Sandia National Labs	Albuquerque	1,338
247.	Public Service E&G	Newark, N.J.	1,326
248.	Armstrong World Ind.	Lancaster, Pa.	1,324
249.	McDermott	New Orleans	1,320
250.	Dominion Resources	Richmond, Va.	1,314
251.	Nebraska State	Lincoln	1,307
252.	LTV	Dallas	1,302
253.	Pfizer	New York	1,300
254.	Warner Lambert	Mor. Plains, N.J.	1,300
255.	SmithKline Beecham	Philadelphia	1,298
256.	Unilever USA	New York	1,285
257.	S. Calif. Op. Eng. #12	Pasadena, Cal.	1,278
258.	U.S. Air	Washington	1,276
259.	Quaker Oats	Chicago	1,273
260.	Texas Utilities	Dallas	1,260
261.	Int'l Monetary Fund	Washington	1,250
262.	Montana Board	Helena	1,250
263.	Upjohn	Kalamazoo, Mich.	1,250
264.	Hallmark Cards	Kansas City, Mo.	1,249
265.	Duke Power	Charlotte, N.C.	1,233
266.	Op. Eng. #3	San Francisco	1,223
267.	Graphic Arts Int'l	Washington	1,222
268.	Olin	Stamford, Conn.	1,222
269.	Rohm & Haas	Philadelphia	1,220
270.	GPU	Parsippany, N.J.	1,218
271.	Emerson Electric	St. Louis	1,200
272.	Teamsters, New Eng.	Boston	1,200
273.	May Dept. Stores	St. Louis	1,197
274.	Corning	Corning, N.Y.	1,194
275.	Mass. Institute of Tech.	Cambridge	1,191
276.	Occidental Petroleum	Los Angeles	1,182
277.	Union Pacific	Bethlehem, Pa.	1,180
278.	FMC	Chicago	1,170
279.	Scott Paper	Philadelphia	1,170
280.	Deseret Mutual	Salt Lake City	1,165
281.	PepsiCo	Purchase, N.Y.	1,153
282.	N. Calif. Carpenters	Oakland	1,152
283.	Times Mirror	New York	1,151
284.	CIBA-GEIGY	Ardsley, N.Y.	1,150
285.	Kimberly-Clark	Dallas	1,150
286.	Georgia-Pacific	Atlanta	1,147
287.	MEBA	Baltimore	1,135
288.	LGWU	New York	1,126
289.	Time Warner	New York	1,125
290.	Columbia Gas System	Wilmington, Del.	1,117
291.	Whirlpool	Benton Harbor	1,110
292.	Cummins Engine	Columbus, Ind.	1,108
293.	Kroger	Cincinnati	1,106
294.	Weyerhaeuser	Tacoma, Wash.	1,100
295.	BASF	Parsippany, N.J.	1,088
296.	San Diego County	San Diego	1,088
297.	Contel	Atlanta	1,086
298.	Boise Cascade	Boise, Idaho	1,076
299.	General Mills	Minneapolis	1,074
300.	Continental Can	Norwalk, Conn.	1,071
301.	Op. Eng. #302/612	Seattle	1,071
302.	Niagara Mohawk Power	Syracuse, N.Y.	1,070
303.	Reynolds Metal	Richmond, Va.	1,060
304.	W.R. Grace	New York	1,054
305.	Ashland Oil	Ashland, Ky.	1,053
306.	Bayer USA	Pittsburgh	1,050
307.	Detroit Edison	Detroit	1,049
308.	Northeast Utilities	Hartford, Conn.	1,038
309.	Elec. Ind. Joint Board	Flushing, N.Y.	1,029
310.	N.H. Retirement	Concord, N.H.	1,027
311.	Hoffman La Roche	Nutley, N.J.	1,020
312.	Montgomery Ward	Chicago	1,018
313.	Northern States Power	Minneapolis	1,002
314.	American Nat'l Can	Chicago	1,000
315.	ARAMCO Services	Houston	1,000
316.	CBS	New York	1,000
317.	Hoechst Celanese	Somerville, N.J.	1,000
318.	Liberty Mutual	Boston	1,000
319.	Dana	Toledo, Ohio	999
320.	Motion Picture Industry	Studio City, Cal.	994
321.	Schlumberger	New York	985
322.	Ingersoll-Rand	W'dcliff Lake,N.J.	980
323.	Combustion Engineering	Stamford, Conn.	975
324.	Kellogg	Battle Crk, Mich.	975
325.	CSX	Richmond, Va.	973
326.	Consumers Power	Jackson, Mich.	967
327.	Whitman	Chicago	966
328.	Westvaco	New York	953
329.	Norfolk Southern	Norfolk, Va.	951
330.	Conrail	Philadelphia	947
331.	N.Y. Dist. Carpenters	New York	945
332.	Chicago Transit Auth.	Chicago	945
333.	Cincinnati Bell	Cincinnati	941
334.	R.R. Donnelley	Chicago	940
335.	Polaroid	Cambridge,Mass.	940
336.	United Church of Christ	New York	936
337.	Baxter International	Deerfield, Ill.	934
338.	Farley Industries	Chicago	933
339.	Federal Express	Memphis, Tenn.	926
340.	San Jose City	San Jose, Cal.	920
341.	S. Calif. Carpenters	Los Angeles	918
342.	Cincinnati City	Cincinnati	918
343.	Control Data	Minneapolis	912
344.	Pillsbury	Minneapolis	911
345.	Bell Comm. Research	Livingston, N.J.	909
346.	Entergy	New Orleans	907
347.	Marsh & McLennan	Brooklyn, N.Y.	901
348.	Sacramento County	Sacramento, Cal.	901
349.	Greyhound Lines	Dallas	900
350.	Hanson Industries	Iselin, N.J.	900
351.	Manville	Denver	900
352.	Michigan Civil Service	Lansing	894
353.	Lutheran Church-Mo.	St. Louis	883
354.	Centerior Energy	Cleveland	881
355.	Fluor	Irvine, Cal.	881
356.	Alameda County	Oakland, Cal.	870
357.	Central & South West	Dallas	865
358.	San Bernardino County	S. Bernard., Cal.	861
359.	Squibb	Princeton, N.J.	854
360.	American Red Cross	Alexandria, Va.	852
361.	Jefferson-Smurfit	St. Louis	851
362.	Panhandle Eastern	Houston	850
363.	Capital Cities/ABC	New York	841
364.	Minneapolis Employees	Minneapolis	839
365.	Denver Public Schools	Denver	838
366.	Mead	Dayton, Ohio	836
367.	Safeway	Oakland, Cal.	830
368.	Greyhound Lines Amal.	Des Moines	827
369.	Blue Cross/Shield Nat'l	Chicago	825
370.	San Diego City	San Diego	825
371.	Black & Decker	Towson, Md.	821
372.	Owens-Corning	Toledo, Ohio	817
373.	Pennsylvania P&L	Allentown, Pa.	817
374.	Borden	Columbus, Ohio	815
375.	Central Pa. Teamsters	Reading, Pa.	815
376.	Mass. Bay Transit	Boston	814
377.	Colt Industries	New York	804
378.	Campbell Soup	Camden, N.J.	803
379.	Ethyl	Richmond, Va.	800
380.	Harris	Melbourne, Fla.	800
381.	National Steel	Pittsburgh	800
382.	N. Dakota State Board	Bismarck	800
383.	Arthur Andersen	Chicago	780
384.	Dallas City	Dallas	775
385.	YMCA	New York	775
386.	Milwaukee County	Milwaukee	770
387.	N.J. Hospital Assoc.	Princeton, N.J.	770
388.	Baltimore County	Towson, Md.	762
389.	Burlington Resources	Seattle	760
390.	Coca-Cola	Atlanta	751
391.	Santa Fe Pacific	Chicago	750
392.	Winn Dixie Stores	Jacksonville, Fla.	749
393.	Dayton Hudson	Minneapolis	748
394.	Boston City	Boston	747
395.	Enron	Houston	745
396.	Contra Costa County	Martinez, Cal.	741
397.	Paramount Comm.	New York	741
398.	Jacksonville City	Jacksonville, Fla.	736
399.	Steelcase	Gr. Rapids, Mich.	734
400.	Kaiser Alum./Chemical	Oakland, Cal.	731
401.	Maytag	Newton, Iowa	730
402.	DeLuxe	St. Paul, Minn.	725
403.	Memphis City	Memphis, Tenn.	725
404.	Baltimore G&E	Baltimore	723
405.	Johnson Controls	Milwaukee	720
406.	Farmland Industries	Kansas City, Mo.	713
407.	Navy Resale/Support	New York	712
408.	Sundstrand	Rockford, Ill.	711
409.	Op. Eng. Midwest	Countryside, Ill.	710
410.	Gillette	Boston	707
411.	Goldman, Sachs	New York	705
412.	Montgomery Co. Empl.	Rockville, Md.	702
413.	Masters, Mates & Pilots	Linth. Hgts., Md.	700
414.	Ohio Edison	Akron	693
415.	Peoples Energy	Chicago	692
416.	Union Camp	Wayne, N.J.	691
417.	E-Systems	Dallas	690
418.	General Signal	Stamford, Conn.	689
419.	Nat'l Automatic Sprinkler	Landover, Md.	688
420.	Brunswick	Skokie, Ill.	686
421.	Schering-Plough	Madison, N.J.	684
422.	Household International	Prospect Hts., Ill.	680
423.	Colorado Fire & Police	Englewood	678
424.	Op. Eng. #18	Cleveland	678
425.	Amalgamated Life	New York	675
426.	Battelle Memorial Inst.	Columbus, Ohio	675
427.	Gannett	Arlington, Va.	667
428.	Screen Actors/Produce	Burbank, Cal.	665
429.	Budd	Troy, Mich.	662
430.	Painters Int'l	Washington	661
431.	Parsons	Pasadena, Cal.	661
432.	Wayne County	Detroit	660
433.	McKesson	San Francisco	659
434.	AMP	Harrisburg, Pa.	658
435.	Food/Comm. Wkrs. Nat'l	Chicago	657
436.	La. Public Schools	Baton Rouge, La.	657
437.	Southland	Dallas	657
438.	Missouri Local Gov't	Jefferson City	656
439.	MITRE	Bedford, Mass.	652
440.	Aerospace	El Segundo, Cal.	650
441.	Coastal	Houston	650
442.	Wal-Mart Stores	Bentonville, Ark.	649
443.	Mayo Clinic	Rochester, Minn.	648
444.	Teamsters #710	Chicago	648
445.	Marriott	Washington	643
446.	Nalco Chemical	Naperville, Ill.	643
447.	Mars	McLean, Va.	642
448.	UFCW #459	Atlanta	642
449.	RSSI	New York	633
450.	Amer. Fed.-Musicians	New York	622
451.	Burlington Industries	Greensboro, N.C.	622
452.	Calif. Iron Wkrs.	San Marino	622
453.	PacifiCorp.	Portland, Ore.	622
454.	Allegheny Power	New York	620
455.	New England Electric	W'b'ough, Mass.	614
456.	New York State E&G	Ithaca	613
457.	Bridgestone/Firestone	Chicago	610
458.	UFCW-Nat'l HQ	Washington	608
459.	GCIU-Employer	El Monte, Cal.	605
460.	CPC International	Englew'd Cl., N.J.	603
461.	Wickes	San. Monica, Cal.	602
462.	Peat Marwick Main	Montvale, N.J.	601
463.	Chicago Laborers	Forest Park, Ill.	600
464.	San Diego G&E	San Diego	596
465.	Tektronix	Beaverton, Ore.	595
466.	Elec. Wkrs. Int'l HQ	Washington	594
467.	Washington Post	Washington	592
468.	GCIU Inter-Local	Chicago	591
469.	Service Empl. #32B/32J	New York	586
470.	Union Electric	St. Louis	584
471.	McGraw-Hill	New York	582
472.	Florida Progress	St. Petersburg	579
473.	Comm. Wkrs./Int'l Typo.	Colorado Springs	578

SPECIAL REPORT

Ranking of funds/sponsors 201-1,000

Assets in $ millions

Rank	Fund/sponsor	Location	Assets
474.	Wis. Electric Power	Milwaukee	578
475.	Lear Siegler	Livingston, N.J.	577
476.	Houston Firemen	Houston	575
477.	Sara Lee	Chicago	575
478.	Beazer Materials & Svc.	Pittsburgh	572
479.	Ohio Carpenters	Cleveland	572
480.	White Consolidated	Cleveland	570
481.	Longshoremen ILA, Int'l	New York	567
482.	Beatrice	Chicago	565
483.	Sandoz	New York	562
484.	Houston Industries	Houston	561
485.	Carpenters, Chic. Dist.	Chicago	560
486.	Op. Engrs. #324	Birm'ham, Mich.	555
487.	Avon Products	New York	553
488.	Air Products & Chem.	Allentown, Pa.	552
489.	Arthur D. Little	Cambridge,Mass.	550
490.	Laborers & Retirement	Chicago	549
491.	Paper Industry Union	Nashville, Tenn.	549
492.	Food/Comm. Wkrs. #27	Baltimore	548
493.	Michigan Consol. Gas	Detroit	548
494.	Dallas Police & Fire	Dallas	544
495.	EG&G	Wellesley, Mass.	542
496.	Carolina Power & Light	Raleigh, S.C.	540
497.	Teamsters #705	Chicago	540
498.	Norton	Worcester, Mass.	539
499.	H.J. Heinz	Pittsburgh	537
500.	Premark	Deerfield, Ill.	536
501.	Great Northern Nekoosa	Norwalk, Conn.	535
502.	Pitney Bowes	Stamford, Conn.	535
503.	Borg-Warner	Chicago	533
504.	Inter-Amer. Dev. Bank	Washington	533
505.	B.F. Goodrich	Akron, Ohio	532
506.	Atlanta General Empl	Atlanta	531
507.	Mercantile Stores	New York	530
508.	Tribune	Chicago	529
509.	Chicago Firemen	Chicago	522
510.	Fresno County	Fresno, Cal.	522
511.	Transco Energy	Houston	522
512.	Centel	Chicago	520
513.	Phelps Dodge	Phoenix, Ariz.	515
514.	Walgreen	Deerfield, Ill.	515
515.	F.W. Woolworth	New York	515
516.	Hospital Corp.	Nashville, Tenn.	514
517.	Alcan Aluminium	Cambridge,Mass.	513
518.	Andersen	Bayport, Minn.	512
519.	Cargill	Minneapolis	510
520.	Longshore/ILWU/PMA	San Francisco	510
521.	Westinghouse Hanford	Richland, Wash.	506
522.	Pennwalt	Philadelphia	504
523.	Cincinnati G&E	Cincinnati	503
524.	Fort Worth Employees	Fort Worth	503
525.	Houston Policemen	Houston	503
526.	Northern Telecom	Nashville, Tenn.	502
527.	Seattle City	Seattle	502
528.	Sherwin-Williams	Cleveland	502
529.	American Standard	New York	500
530.	Northern Illinois Gas	Aurora, Ill.	500
531.	Siemens Capital	New York	500
532.	Teamster Affiliates	Washington	500
533.	Timken	Canton, Ohio	500
534.	Ventura County	Ventura, Cal.	500
535.	Boc Group	Murray Hill, N.J.	498
536.	Directors Guild	Los Angeles	497
537.	Moore Business Forms	Glenview, Ill.	497
538.	Amer. Home Products	New York	494
539.	Thiokol	Ogden, Utah	493
540.	Laborers Int'l HQ	Washington	492
541.	Cleveland-Cliffs	Cleveland	491
542.	Houston Municipal	Houston	491
543.	Fairfax County	Fairfax, Va.	487
544.	USG	Chicago	485
545.	Missouri Highway Empl.	Jefferson City	484
546.	Stanley Works	N. Britain, Conn.	484
547.	Carpenter Technology	Reading, Pa.	482
548.	Pittsburgh Nat'l Bank	Pittsburgh	482
549.	Amstar	Stamford, Conn.	479
550.	Food/Comm., Butchers	Oakland, Cal.	479
551.	Major League Players	New York	479
552.	Long Island Lighting	Hicksville, N.Y.	477
553.	Delmarva P&L	Wilmington, Del.	474
554.	S. Calif. Elec. Wkrs.	Los Angeles	473
555.	Perkin-Elmer	Norwalk, Conn.	470
556.	Denver Employees	Denver	469
557.	Varian Associates	Palo Alto, Cal.	469
558.	A.O. Smith	Milwaukee	467
559.	Colorado Public Service	Denver	462
560.	N. Indiana Public Svc.	Hammond, Ind.	460
561.	W. Pa. Teamsters	Pittsburgh	460
562.	Becton Dickinson	Frank. Lake,N.J.	458
563.	Aon	Chicago	457
564.	Boy Scouts	Irving, Texas	455
565.	Quantum Chemical	New York	455
566.	ICI Americas	Wilmington, Del.	450
567.	UFCW-Midwest	Chicago	450
568.	Western Union	Up. Sad. Riv. N.J.	450
569.	Rohr Industries	Chula Vista, Cal.	449
570.	San Joaquin County	Stockton, Cal.	448
571.	San Mateo County	Redw'd City,Cal.	445
572.	Briggs & Stratton	Milwaukee	444
573.	Elec. Contractors	Chicago	442
574.	M.E.B.A., Dist. 2	Brooklyn, N.Y.	441
575.	Bull HN Information	Billerica, Mass.	440
576.	Minneapolis Teachers	Minneapolis	440
577.	S. Calif. Laborers	Los Angeles	439
578.	Principal Mutual Life	Des Moines, Iowa	439
579.	Joseph E. Seagram	New York	439
580.	R.H. Macy	New York	437
581.	Alaska Teamsters	Anchorage	437
582.	V F	Reading, Pa.	436
583.	Belk/Leggett Stores	Charlotte, N.C.	435
584.	Nat'l Telephone Co-op	Washington	434
585.	Roadway Services	Akron, Ohio	431
586.	Minnesota Teachers	Minneapolis	430
587.	Springs Industries	Fort Mill, S.C.	430
588.	Flint City	Flint, Mich.	429
589.	Memphis Light/Gas	Memphis, Tenn.	428
590.	Philadelphia Carpenters	Philadelphia	427
591.	N.Y. State Teamsters	Utica	426
592.	Brooklyn Union Gas	Brooklyn, N.Y.	424
593.	Hearst	New York	424
594.	Teamsters #282	Elmont, N.Y.	424
595.	Oklahoma Fighters	Oklahoma City	420
596.	Parker Hannifin	Cleveland	420
597.	Rochester G&E	Rochester, N.Y.	420
598.	Hotel/Rest. #165/226	Las Vegas	418
599.	Boston Edison	Boston	417
600.	Newell	Freeport, Ill.	417
601.	Seafarers Pension	Cmp Sprngs,Md.	416
602.	S. Calif. Rapid Transit	Los Angeles	414
603.	Reader's Digest	Pleasantville,N.Y.	411
604.	Burroughs Wellcome	Res. Tri., N.C.	410
605.	Geo. A. Hormel	Austin, Texas	409
606.	Johnson & Higgins	New York	409
607.	Bricklayers/Trowel Int'l	Washington	407
608.	Cincinnati Milacron	Cincinnati	406
609.	TPF&C	Philadelphia	406
610.	Clark Equipment	South Bend, Ind.	405
611.	MASCO	Taylor, Mich.	404
612.	MCI Communications	Washington	403
613.	Op. Eng. #15	New York	403
614.	Western Metal Industry	Seattle	401
615.	Carter Hawley Hale	Los Angeles	400
616.	Dresser Industries	Dallas	400
617.	Henley Group	La Jolla, Cal.	400
618.	Lincoln National	Fort Wayne, Ind.	400
619.	Gates Rubber	Denver	397
620.	Hartford City	Hartford, Conn.	397
621.	Building Trades United	Elm Grove, Wis.	396
622.	S. Calif. Pipe Trades	Los Angeles	396
623.	Oklahoma Police	Oklahoma City	394
624.	Chicago Sanitary District	Chicago	392
625.	Electronic Data Systems	Irving, Texas	391
626.	Kern County	Bakersfield, Cal.	390
627.	Trinova	Maumee, Ohio	390
628.	McKinsey	New York, N.Y.	389
629.	Nat'l Industrial Group	Newark, N.J.	389
630.	Sheet Metal Wkrs. #108	Los Angeles	388
631.	Gerber Products	Fremont, Mich.	387
632.	Detroit Carpenters	Ferndale, Mich.	385
633.	Mass. State Carpenters	Wilmington	385
634.	Wash. Area Transit	Washington	385
635.	IBEW #1547	Anchorage	378
636.	Equifax	Atlanta	378
637.	Royal Indemnity	Charlotte, N.C.	378
638.	Williams	Tulsa, Okla.	378
639.	Food/Comm. Meatcut	Cypress, Cal.	377
640.	Phoenix City	Phoenix, Ariz.	376
641.	Vulcan Materials	Birmingham, Ala.	376
642.	Endata	Nashville, Tenn.	375
643.	Ohio Laborers	Columbus, Ohio	375
644.	Producer-Writers Guild	Burbank, Cal.	375
645.	St. Louis Public School	St. Louis	375
646.	Building Services	San Francisco	373
647.	Miami Firefighters/Police	Miami	373
648.	Salt River Project	Phoenix, Ariz.	373
649.	N. Calif. Sheet Metal	San Francisco	372
650.	Washington G&E	Washington	371
651.	Alexander & Alexander	Owings Mills, Md.	369
652.	Austin City	Austin, Texas	369
653.	Fresno City	Fresno, Cal.	368
654.	Ryder Systems	Miami	368
655.	Savings Banks Empl	Woburn, Mass.	367
656.	Tampa Fire & Police	Tampa	367
657.	Teamsters-Philadelphia	Philadelphia	367
658.	Laborer/Mason Tenders	New York	366
659.	Libbey-Owens-Ford	Toledo, Ohio	364
660.	Arlington County	Arlington, Va.	361
661.	Automotive Industries	Oakland, Cal.	361
662.	First Bank System	Minneapolis	361
663.	Agway	Syracuse, N.Y.	360
664.	Hershey Foods	Hershey, Pa.	360
665.	Kansas City Employees	Kansas City, Mo.	360
666.	Western Pa. Laborers	Pittsburgh	360
667.	Potlatch	Walnut Crk, Cal.	359
668.	McDonald's	Oak Brook, Ill.	357
669.	KPL Gas Service	Topeka, Kan.	356
670.	Harris Pump & Supply	Pittsburgh	354
671.	Baton Rouge Police	Baton Rouge, La.	353
672.	La. Municipal Police	Baton Rouge, La.	353
673.	Potomac Electric Power	Washington	353
674.	Consolidated Paper	Wis. Rapids, Wis.	352
675.	Food/Comm. Wkrs. 876	Mad. Hgts,Mich.	352
676.	Comm. Clearing House	Riverwoods, Ill.	351
677.	Daughters of Charity	St. Louis	350
678.	Elec. Products Industry	Flushing, N.Y.	350
679.	Graybar Electric	St. Louis	350
680.	Gulf State Utilities	Beaumont, Texas	350
681.	S.C. Johnson	Racine, Wis.	350
682.	S. Calif. Plasterers	El Monte	350
683.	Rio Grande Industries	Denver	350
684.	Zenith Electronics	Chicago	350
685.	Ernst & Young	New York	346
686.	Op. Eng. #825	Newark, N.J.	346
687.	Square D	Palatine, Ill.	345
688.	St. Louis Police	St. Louis	345
689.	Hawaiian Electric	Honolulu	344
690.	Peabody Holding	St. Louis	342
691.	Cultural Institutions	New York	341
692.	Maryland Supplemental	Baltimore	340
693.	Insurance Support Org.	New York	339
694.	Kerr-McGee	Oklahoma City	338
695.	Sacramento City	Sacramento, Cal.	335
696.	Plumbers/Pipefit. #597	Chicago	334
697.	Bank of New York	New York	332
698.	MAPCO	Tulsa, Okla.	332
699.	Rochester Telephone	Rochester, N.Y.	331
700.	Longshore., STA-ILA	Baltimore	330
701.	Nat'l Fuel Gas	Buffalo, N.Y.	329
702.	Mass. Laborers	Newton, Mass.	328
703.	Nat'l Maritime Union	New York	328
704.	Adolph Coors	Golden, Colo.	327
705.	Louisiana Parochial	Natchitoches, La.	327
706.	Cyclops	Pittsburgh	326
707.	Humana	Louisville, Ky.	326
708.	Carnation	Los Angeles	325
709.	Int'l Minerals/Chemicals	Northbrook, Ill.	325
710.	Knight-Ridder	Miami	325
711.	Publix Super Markets	Lakeland, Fla.	325
712.	S. Calif. Permanente	Pasadena	324
713.	Stone & Webster	New York	324
714.	Nat'l Football League	New York	323
715.	Outboard Marine	Waukegan, Ill.	323
716.	Primerica	Baltimore	323
717.	Carpenters-West. Wash.	Seattle	322
718.	Loral	New York	322
719.	Reliance Electric	Cleveland	320
720.	First Boston	New York	319
721.	Maritime Assoc.-ILA	Houston	319
722.	Oakland County	Pontiac, Mich.	319
723.	Upholsterers, Int'l HQ	Philadelphia	319
724.	Duquesne Light	Pittsburgh	318
725.	Lowe's Cos.	N. Wilkesb., N.C.	317
726.	Blue Cross/Shield-Mich.	Detroit	315
727.	New York Times	New York	315
728.	Northwest'n Steel/Wire	Sterling, Ill.	315
729.	Morton International	Chicago	314
730.	Vermont State	Montpelier	314
731.	Health Employers	St. Paul, Minn.	313
732.	Amer. Insurance Assoc.	New York	312
733.	Norfolk City	Norfolk, Va.	311
734.	Illinois Power	Decatur, Ill.	310
735.	Fireman's Fund	Novato, Cal.	309
736.	Pechiney	Greenwch, Conn.	308
737.	Sonoco Products	Hartsville, S.C.	308
738.	Carpenters Int'l HQ	Washington	306
739.	Elf Acquitaine	Stamford, Conn.	306
740.	Bowater	Darien, Conn.	305
741.	Chicago Park District	Chicago	305
742.	Commonwealth Energy	Cambridge,Mass.	305
743.	Wis. Public Service	Green Bay, Wis.	305
744.	Birmingham City	Birmingham, Ala.	304
745.	Portland General	Portland, Ore.	303
746.	Nestle Food	Purchase, N.Y.	302

Ranking of funds/sponsors 201-1,000

Assets in $ millions

Rank	Fund/sponsor	Location	Assets
747.	Enserch	Dallas	300
748.	Fairfax County Schools	Springfield, Va.	300
749.	Food/Comm. Wkrs #7	Wheat Ridge, Co.	300
750.	Fort Howard Paper	Green Bay, Wis.	300
751.	Paine Webber	Weehawken, N.J.	300
752.	Temple Inland	Diboll, Texas	300
753.	North. Jersey Iron Wkrs	Newark, N.J.	298
754.	Illinois Tool Works	Chicago	297
755.	Laborer #341/942/1331	Anchorage	296
756.	South Carolina G&E	Columbia, S.C.	296
757.	Sonat	Birmingham, Ala.	295
758.	Ball	Muncie, Ind.	294
759.	Dow Jones	Princeton, N.J.	293
760.	Amfac	San Francisco	292
761.	Alco Standard	Valley Forge, Pa.	291
762.	Laborers #472/172	Newark, N.J.	291
763.	Science Applications	San Diego	291
764.	Dillon	Hutchinson, Kan.	290
765.	Plumbers #525	Las Vegas	290
766.	DeKalb County	Decatur, Ga.	289
767.	Scana	Columbia, S.C.	289
768.	Lukens	Coatesville, Pa.	288
769.	Marin County	San Rafael, Cal.	288
770.	Ohio Casualty Insurance	Hamilton, Ohio	287
771.	Conagra	Omaha, Neb.	286
772.	Arvin Industries	Columbus, Ind.	285
773.	Santa Barbara County	S. Barbara, Cal.	285
774.	Syntex	Palo Alto, Cal.	285
775.	U.S. Fidelity & Guaranty	Baltimore	285
776.	St. Louis City	St. Louis	284
777.	Nat'l Gypsum	Dallas	281
778.	Textile Workers-Nat'l	New York	281
779.	Carpenters, West. Pa.	Pittsburgh	280
780.	A.G. Edwards	St. Louis	280
781.	Federal-Mogul	Detroit	280
782.	Tecumseh Products	Tecumseh, Mich.	280
783.	Interco	St. Louis	279
784.	Revlon	New York	279
785.	St. Paul Teachers	St. Paul, Minn.	276
786.	Wrigley	Chicago	276
787.	Iron Workers-Texas	Houston	275
788.	Illinois Carpenters	Geneva, Ill.	274
789.	Wichita City	Wichita, Kan.	273
790.	J.M. Huber	Edison, N.J.	272
791.	San Antonio Fire/Police	S. Antonio, Texas	272
792.	S'western Public Svc.	Amarillo, Texas	272
793.	Pennsylvania Municipal	Harrisburg, Pa.	271
794.	Walt Disney	Burbank, Calif.	270
795.	New Orleans Steamship	New Orleans	269
796.	Simpson Investment	Seattle	269
797.	Alltell	Little Rock, Ark.	268
798.	Capital Holding	Louisville, Ky.	268
799.	Amerada Hess	New York	265
800.	Machinists I.A.M. #9	Bridgeton, Mo.	264
801.	IBEW #332	San Jose, Calif.	263
802.	Banco Popular	San Juan, P.R.	260
803.	Harnischfeger	Brookfield, Wis.	260
804.	Miami Beach City	Miami Beach	260
805.	Montgomery Co. Educ.	Rockville, Md.	260
806.	Mass. General Hospital	Boston	259
807.	Knoxville City	Knoxville Tenn.	258
808.	Michelin Tire	Greenville, S.C.	257
809.	GATX	Chicago	256
810.	Laborers, Central	Jacksonville, Ill.	255
811.	Shelby County	Memphis, Tenn.	255
812.	Steelworkers, Nat'l HQ	Pittsburgh	254
813.	Teco Energy	Tampa	254
814.	Gould	Eastlake, Ohio	253
815.	Pittston	Greenwch, Conn.	252
816.	Puget Sound P&L	Bellevue, Wash.	252
817.	Hotel/Restaurant #1	Naperville, Ill.	251
818.	Alaska Laborers	Anchorage	251
819.	Oakland Police/Fire	Oakland, Calif.	251
820.	Actors Eq./Screen Extra	New York	250
821.	Blue Cross/Shield Iowa	Des Moines, Iowa	250
822.	Carpenters #1644	Minneapolis	250
823.	Continental Grain	New York	250
824.	Elec. Workers #1186	Honolulu	250
825.	Harcourt Brace	Orlando, Fla.	250
826.	Loews	New York	250
827.	Marion Labs	Kansas City, Mo.	250
828.	Service Empl. #144	New York	249
829.	Intel	Santa Clara, Cal.	248
830.	Laborers, Indiana	Terre Haute, Ind.	248
831.	American Water Works	Voorhees, N.J.	247
832.	Chicago City	Chicago	247
833.	Grand Union	Wayne, N.J.	246
834.	Food/Comm. Wkr. #576	Kansas City, Mo.	245
835.	Levi Strauss	San Francisco	245
836.	Arkla	Shreveport, La.	244
837.	K.C. Public Schools	Kansas City, Mo.	244
838.	ARA Services	Philadelphia	241
839.	Great A&P Tea	Montvale, N.J.	241
840.	S. Cal. Ret. Clerks/Drug	Los Angeles	241
841.	Food Lion	Salisbury, N.C.	240
842.	Marmon Group	Chicago	240
843.	Atlantic City Electric	Pleasantville, N.J.	239
844.	Charter	Jacksonville, Fla.	239
845.	ONEOK	Tulsa, Okla.	239
846.	Willamette Industries	Portland, Ore.	239
847.	Iron Workers-S. Ohio	Dayton, Ohio	238
848.	Great Lakes Carbon	Briarcliff Manor	237
849.	Moorman Mfg.	Quincy, Ill.	237
850.	Sisters of Providence	Seattle	236
851.	Greater Cleve. Hosp.	Cleveland	235
852.	Harsco	Camp Hill, Pa.	235
853.	United Services Auto	San Antonio, Tex.	234
854.	Rubbermaid	Wooster, Ohio	233
855.	AMCA International	Charlotte, N.C.	232
856.	Kansas City Police	Kansas City, Mo.	232
857.	PACCAR	Bellevue, Wash.	232
858.	Iron Wkrs. #40,361,417	New York	231
859.	Media General	Richmond, Va.	231
860.	NVF	Miami Beach	231
861.	Op. Engineers #542	Norristown, Pa.	231
862.	Cooper Tire & Rubber	Findlay, Ohio	230
863.	Prince George's County	Up. Marlb., Md.	229
864.	Super Valu Stores	Minneapolis	229
865.	Brown Forman	Louisville, Ky.	228
866.	Machinists, Auto #289	Seattle	228
867.	Sisters of Mercy/Detroit	Farmington Hills	228
868.	U.S. Borax & Chemical	Los Angeles	227
869.	Cal. State Auto Assoc.	San Francisco	226
870.	Cox Enterprises	Atlanta	225
871.	TBG	New York	225
872.	A.B. Dick	Chicago	224
873.	Wyatt	Washington	223
874.	Amica Mutual	Providence, R.I.	222
875.	Dennison Mfg.	Fram'ham, Mass.	222
876.	Machinists #701	Chicago	222
877.	SKF USA	King/Prussia, Pa.	221
878.	Allegheny Int'l	Pittsburgh	220
879.	S. Calif. Auto Club	Los Angeles	220
880.	Leo Burnett	Chicago	220
881.	Dynacast	York. Hgts, Ohio	220
882.	Hotel Trades Council	New York	220
883.	Stanislaus County	Modesto, Calif.	220
884.	N.J. Trucking Empl.	Union City, N.J.	220
885.	Witco	New York	220
886.	Arkansas Highway	Little Rock, Ark.	219
887.	Babcock Industries	Fairfield, Conn.	218
888.	Diversified Energies	Minneapolis	218
889.	Jack Eckerd	Clearwater, Fla.	218
890.	Kansas City P&L	Kansas City, Mo.	217
891.	Omaha Public Power	Omaha, Neb.	217
892.	Signode	Glenview, Ill.	216
893.	Allegheny County	Pittsburgh	215
894.	Avery International	Pasadena, Calif.	215
895.	Chubb	New York	215
896.	Mid-Amer. Iron Workers	Lansing, Ill.	215
897.	SPX	Muskegon, Mich.	215
898.	Anne Arundel County	Annapolis, Md.	214
899.	Iron Workers #25	Novi, Mich.	214
900.	Foxboro	Foxboro, Mass.	213
901.	Ohio Highway Patrol	Columbus	211
902.	Indianapolis P&L	Indianapolis	210
903.	Penn Central	Cincinnati	210
904.	ADT Security Systems	Parsippany, N.J.	208
905.	Anchorage Police/Fire	Alaska	208
906.	Elec. Wkrs. #103	Dorchestr, Mass.	208
907.	Castle & Cook	Los Angeles	207
908.	YWCA	New York	207
909.	Archer Daniels Midland	Decatur, Ill.	206
910.	H.E. Butt Grocery	San Antonio	206
911.	Engelhard	Edison, N.J.	206
912.	Oklahoma G&E	Oklahoma City	206
913.	Va. Joint Teamster #83	Richmond, Va.	206
914.	Copley Press	La Jolla, Calif.	205
915.	Painters #9	New York	205
916.	St. Louis Firemen	St. Louis	205
917.	Op. Engineers #66	Monroeville, Pa.	204
918.	IBEW #58	Detroit	203
919.	Lubrizol	Wickliffe, Ohio	203
920.	Plumbers/Steam. #420	Philadelphia	203
921.	White Castle Systems	Columbus, Ohio	203
922.	Kennametal	Latrobe, Pa.	202
923.	Philadelphia Laborers	Philadelphia	202
924.	Genuine Parts	Atlanta	201
925.	Limited	Columbus, Ohio	201
926.	Richmond Supplemental	Richmond, Va.	201
927.	Twin Cities Pipe Trades	St. Paul, Minn.	201
928.	Brown Group	St. Louis	200
929.	Bufcor	St. Petersburg	200
930.	W.W. Grainger	Skokie, Ill.	200
931.	Holiday	Memphis, Tenn.	200
932.	Iron Wkrs-Philadelphia	Philadelphia	200
933.	League Voluntary Hosp.	New York	200
934.	Mercedes-Benz	Montvale, N.J.	200
935.	Mine Safety Appliances	Pittsburgh	200
936.	Minneapolis Police	Minneapolis	200
937.	Nash./Davidson County	Nashville, Tenn.	200
938.	Omaha Schools	Omaha, Neb.	200
939.	Plumbers/Steam. #638	New York	200
940.	Providence Employees	Providence, R.I.	200
941.	Rexnord	Brookfield, Wis.	200
942.	Tacoma Employees	Tacoma, Wash.	200
943.	Teamsters, Mid-Jersey	New Brunswick	200
944.	Tulare County	Visalia, Calif.	200
945.	UAW National HQ	Detroit	200
946.	Walter Industries	Tampa, Fla.	200
947.	Teamsters #641	Seacaucus, N.J.	199
948.	Comm. Wkrs. of Amer.	Washington	198
949.	Seattle Iron Wkrs.	Seattle	197
950.	Tampa General Empl.	Tampa	196
951.	Tandy/Radio Shack	Fort Worth,Tex.	196
952.	Sheet Metal Wkrs. #73	Chicago	195
953.	Sonoma County	Santa Rosa, Cal.	195
954.	Supermarkets General	Woodbridge, N.J.	195
955.	N.J.Carpenters	Madison, N.J.	194
956.	Central Illinois Light	Peoria, Ill.	194
957.	El Paso City	El Paso, Texas	194
958.	Fleming	Oklahoma City	194
959.	Kaman	Bloomfield, Conn.	194
960.	Op. Eng. #428	Phoenix, Ariz.	194
961.	Op. Eng. #701	Portland, Ohio	194
962.	Amer. Family Mutual	Madison, Wis.	193
963.	American Greetings	Cleveland	193
964.	Salomon Brothers	New York	193
965.	Kimball Int'l	Jasper, Ind.	192
966.	Koch Industries	Wichita, Kan.	192
967.	Laborers, Montana	Great Falls, Mont.	192
968.	Yellow Freight	Overlnd Pk., Kan.	192
969.	Tallahassee City	Tallahassee, Fla.	191
970.	Indiana Farmers Mutual	Indianapolis	190
971.	Omnicom Group	New York	190
972.	Longs Drug Stores	Walnut Crk, Cal.	189
973.	Union Texas Petroleum	Houston	189
974.	Genesee County	Flint, Mich.	188
975.	Sterling Drug	New York	188
976.	Plumbers 444/159/342-3	San Francisco	186
977.	A.E. Staley Mfg.	Decatur, Ill.	186
978.	Auto Workers #65	New York	185
979.	Crane	New York	185
980.	Fairchild Industries	Chantilly, Va.	185
981.	Food/Comm.Wkrs. 464	Little Falls, N.J.	185
982.	Maritime Union #333	Staten Island	185
983.	Amsted Industries	Chicago	184
984.	Asbestos Wkrs. Int'l	Washington	184
985.	Consol. Freightways	Palo Alto, Calif.	184
986.	Fred S. James	New York	184
987.	Detroit Medical Center	Detroit	183
988.	Fieldcrest Cannon	Eden, N.Y.	183
989.	La. Municipal Empl.	Baton Rouge, La.	183
990.	United States Sugar	Clewiston, Fla.	183
991.	Hiram Walker	Detroit	183
992.	Blue Cross/Mass.	Boston	182
993.	Dayton P&L	Dayton, Ohio	182
994.	Louisiana Sheriffs	Monroe, La.	182
995.	S. Calif. Lumber Ind.	El Monte, Calif.	182
996.	Wang Labs	Lowell, Mass.	182
997.	Hartford Hospital	Hartford, Conn.	181
998.	InterPublic	New York	181
999.	CertainTeed	Valley Forge, Pa.	180
1000.	Curtiss-Wright	Lyndhurst, N.J.	180
	Total		**440,208**

On the following pages, *Pensions & Investments* presents sketches of the 200 largest pension funds in the United States. The profiles include each fund's asset allocation, investment managers and key personnel.

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A

Abbott Laboratories

	($ millions)
Total assets	1,923
Defined benefit	904
Defined contribution	1,019
401(k)	1,019
Employer DB contributions	0
Benefit payments	22
Employer DC contributions	20
Defined benefit asset mix:	
Stocks	45%
Fixed income	55%
Defined contribution asset mix:	
Company stock	90%
GICs/BICs	10%

ABBOTT PARK, Ill. — As of Sept. 30, Abbott Laboratories' total employee benefit assets increased 25.7% to $1.923 billion from $1.53 billion a year earlier. Defined benefit assets increased 17.4% during the same period, to $904 million from $770 million. Defined contribution assets increased 34.1%, to $1.019 billion from $760 million.

Equity managers: Domestic — Hagler, Mastrovita & Hewitt; Jennison; and RCM.

Fixed-income manager: Domestic — RCM.

Continental Bank is master trustee.

A.G. Olsen, director, oversees the investment management of the fund.

Aetna Life & Casualty Co.

	($millions)
Total assets	2,703
Defined benefit	1,730
Defined contribution	973
401(k)	947
Other	26
Employer DB contributions	0
Benefit payments	100
Internally managed assets:	
Total DB	1,730
Total DC	973
Defined benefit asset mix:	
Stocks	64%
Fixed income	28%
Cash equivalents	1%
Real estate equity	6%
Mortgages	1%
Defined contribution asset mix:	
Company stock	30%
Other stock	8%
Other	62%

HARTFORD, Conn. — As of Sept. 30, Aetna Life & Casualty Co.'s total employee benefit assets increased 20.6% to $2.703 billion from $2.242 billion a year earlier. Defined benefit assets increased 18.3% during the same period to $1.73 billion from $1.462. Total defined contribution plan assets increased 24.7% to $973 million from $780 million.

The key personnel overseeing the plan are P.R. Roberts, senior vice president-investments, and R.A. Smith, senior vice president-pensions and financial services.

Retirement Systems of Alabama

	($ millions)
Total assets*	7,884
Defined benefit	7,884
Employer DB contributions	299
Benefit payments	330
*book valuc	
Internally managed assets	7,884
Hedging devices used:	
Stock options	
Defined benefit asset mix:	
Stocks	9%
Fixed income	52%
Cash equivalents	10%
Mortgages	22%
Mortgage-backed securities	7%

MONTGOMERY, Ala. — As of Sept. 30, the Retirement Systems of Alabama's total employee benefit assets increased 12.6% to $7.884 billion from $7 billion a year earlier. All assets are defined benefit and managed internally.

Key personnel overseeing the investment management of the fund are David G. Bronner, chief executive officer; Hunter Reaves, director of fixed income; and Cheryl Duke, director of equities.

Alaska Retirement Systems

	($ millions)
Total assets	4,124
Defined benefit	4,124
Employer DB contributions	50
Internally managed assets	2,418
Hedging devices used:	
Stock index futures	
Fixed-income futures	
Defined benefit asset mix:	
Stocks	36%
Fixed income	42.5%
Cash equivalents	11%
Real estate equity	5.8%
Mortgages	4.7%

JUNEAU, Alaska — As of Sept. 30, the Alaska Retirement Systems' total employee benefit assets increased 18.6% to $4.124 billion from $3.476 billion a year earlier. All assets are in defined benefit plans.

Equity managers: Domestic — Fred Alger; IDS; INVESCO; Lehman Ark; Loomis, Sayles; Miller, Anderson & Sherrerd; State Street Bank; and United Capital Management.

International — Citicorp and J. P. Morgan.

Real estate managers: Aetna; Equitable; John Hancock; JMB; Karsten; J.P. Morgan; and Sentinel.

The master custodian is First Pennsylvania.

Key personnel overseeing the investment management of the fund are Milton Barker, deputy commissioner; Michael Cheung, and Steve Verschoor, investment officers.

Allied Signal Inc.

	($ millions)
Total assets*	7,000
Defined benefit	5,000
Defined contribution	2,000
Employer DB contributions	70
Benefit payments	260
*as of June 30, 1989	
Internally managed assets:	
Total DB	1,259
Defined benefit asset mix:	
Stocks	45%
Fixed income	33%
Cash equivalents	12%
Real estate equity	8%
Other	2%

MORRISTOWN, N.J. — As of June 30, Allied Signal Inc.'s total employee benefit assets increased 5.9% to $7 billion from $6.609 billion nine months earlier. Defined benefit assets increased 3.5% during the same period, to $5 billion from $4.833 billion. Defined contribution plan assets increased 12.6% to $2 billion from $1.776 billion.

Equity managers: Domestic — Bankers Trust; Delaware Investments; Johnson, Valliant & Broadfoot; John A. Levin; Lincoln Capital; Lord, Abbett; Donald Smith; Verus Capital; and Weiss, Peck & Greer.

International — Batterymarch; Arnhold & S. Bleichroeder; and Morgan Grenfell.

Fixed-income managers: Domestic — Delaware; W.R. Huff; and J.P. Morgan.

Real estate managers: Aetna; Copley; Hancock; MIG; PCA; Prudential; RREEF; Travelers; and TCW.

The master trustee and global custodian is Northern Trust.

Key personnel overseeing the in-

vestment management of the fund are Edward J. Tokar, vice president-investments; Mark E. Smith, senior portfolio manager; and Jay W. Burden, portfolio manager.

Aluminum Co. of America

	($ millions)
Total assets	3,200
Defined benefit	2,660
Defined contribution	540
401(k)	540
Employer DB contributions	160
Benefit payments	180
Employer DC contributions	20
Defined benefit asset mix:	
Stocks	21%
Fixed income	75%
Cash equivalents	2%
Real estate equity	2%
Defined contribution asset mix:	
Company stock	30%
Other stock	5%
GICs/BICs	65%

PITTSBURGH — As of Sept. 30, Aluminum Co. of America's total employee benefit assets increased 10.7% to $3.2 billion from $2.892 billion a year earlier. Defined benefit assets increased 10.8% during the same period, to $2.66 billion from $2.4 billion. During the same period, defined contribution plan assets increased 9.8% to $540 million from $492 million.

Equity managers: Domestic — Franklin Portfolio; Geewax, Terker; Rosenberg Institutional; State Street Bank; and Wells Fargo.

International — Capital Guardian and Mercator.

Fixed-income managers: Domestic — Massachusetts Financial; Mellon Bank; Prudential; STW Fixed Income.

International — Massachusetts Financial and Prudential.

Real estate managers: Coldwell Banker; Equitable; Hancock; and RREEF.

The master trustee and global custodian is Mellon Bank.

Key personnel overseeing the investment management of the fund are Joseph C. Pellegrino, director pension investments, and Donna S. Barr, trust investment analyst.

American Airlines

	($ millions)
Total assets	4,000
Defined benefit	2,000
Defined contribution	2,000
401(k)	400
Other	1,600
Employer DB contributions	130
Employer DC contributions	50
Internally managed assets:	
Total DB	250
Total DC	50
Hedging devices used:	
Stock options	
Defined benefit asset mix:	
Stocks	33%
Fixed income	60%
Cash equivalents	7%
Defined contribution asset mix:	
Other stock	75%
Fixed income	15%
Cash equivalents	10%

FORT WORTH, Texas — As of Sept. 30, American Airlines' total employee benefit assets increased 29% to $4 billion from $3.1 billion a year earlier. Defined benefit assets increased 29% during the same period, to $2 billion from $1.55 billion. Defined contribution assets also increased 29%, to $2 billion from $1.55 billion.

Equity managers: Domestic — Atlanta Capital; Barrow, Hanley; Capital Guardian; Cashman Farrell; Dreman; Dewey Square; Ganaucheau, Stupfel; Hotchkis and Wiley; Independence; NCNB-Texas; Penmark; and United Capital.

International — H.D. International; Morgan Grenfell; and Rowe Price-Fleming.

The master trustee is NCNB-Texas; the global custodian is Chase.

Key personnel overseeing the investment management of the fund are William F. Quinn, president-AMR Investment Services, and Dennis M. O'Hara, vice president-AMR Investment Services.

American Brands Inc.

	($ millions)
Total assets	1,684
Defined benefit	1,291
Defined contribution	393

Largest corporate funds

Fund	($ millions)
AT&T	42,700
General Motors	40,900
General Electric	28,912
IBM	25,775
Ford Motor	22,800
E.I. du Pont de Nemours	18,681
NYNEX	16,062
Ameritech	14,300
Bell Atlantic	13,635
BellSouth	12,843
GTE	12,423
Pacific Telesis	11,443
Boeing	11,001
USX	9,825
U S WEST	9,800
Eastman Kodak	9,500
Rockwell International	9,124
Lockheed	8,926
Southwestern Bell	8,334
United Technologies	8,261
Sears, Roebuck	8,101
Exxon	8,066
Shell Oil	7,840
McDonnell Douglas	7,589
Philip Morris	7,470
Total	**374,311**

Largest public funds

Fund	($ millions)
California Employees	54,000
New York City	45,422
New York State & Local	44,238
California State Teachers	30,335
New York State Teachers	28,130
New Jersey	24,526
Texas Teachers	23,500
Wisconsin State Board	20,033
Ohio Public Employees	19,305
Florida State Board	18,700
Ohio State Teachers	18,059
State of Michigan	17,948
North Carolina	16,791
Pennsylvania Schools	15,430
Washington State Board	12,660
Minnesota State Board	12,343
Oregon Public Employes	11,178
Maryland State Systems	11,065
Virginia Supplemental	10,244
Pennsylvania Employes	9,504
Los Angeles County	9,359
Colorado Employees	9,227
Georgia Teachers	8,90[illegible]
Illinois Teachers	8,475
Tennessee Consolidated	8,075
Total	**487,455**

Largest miscellaneous funds

Fund	($ millions)
TIAA-CREF	81,000
University of California	12,900
United Nations Joint Staff	8,414
Federal Retirement Thrift	4,319
Illinois State Universities	3,845
United Methodist Church	3,566
World Bank	3,292
Tennessee Valley Authority	3,090
Southern Baptist	2,559
Presbyterian Church	2,400
Nat'l Rural Electric Co-op	2,304
Episcopal Church	1,837
Evangelical Lutheran	1,782
Total	**131,308**

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Profit-sharing	330
Thrift or savings	63

OLD GREENWICH, Conn. — As of Sept. 30, American Brands Inc.'s total employee benefit assets were $1.684 billion. Defined benefit assets were $1.291 billion; defined contribution assets, $393 million.

American Electric Power Service Corp.

	($ millions)
Total assets	1,789
Defined benefit	1,260
Defined contribution	529
Thrift/savings/401(k)	515
Other	14
Employer DB contributions	0
Benefit payments	47
Employer DC contributions	13

Hedging devices used:
Stock options
Stock index futures

Defined benefit asset mix:

Stocks	69%
Fixed income	20%
Cash equivalents	7%
Real estate equity	1%
Venture capital	3%

Defined contribution asset mix:

Company stock	27%
Other stock	13%
GICs/BICs	60%

COLUMBUS, Ohio — As of Sept. 30, American Electric Power Service Corp.'s total employee benefit assets increased 14.6% to $1.789 billion from $1.561 billion a year earlier. Defined benefit assets increased 18.6% during

Largest union funds

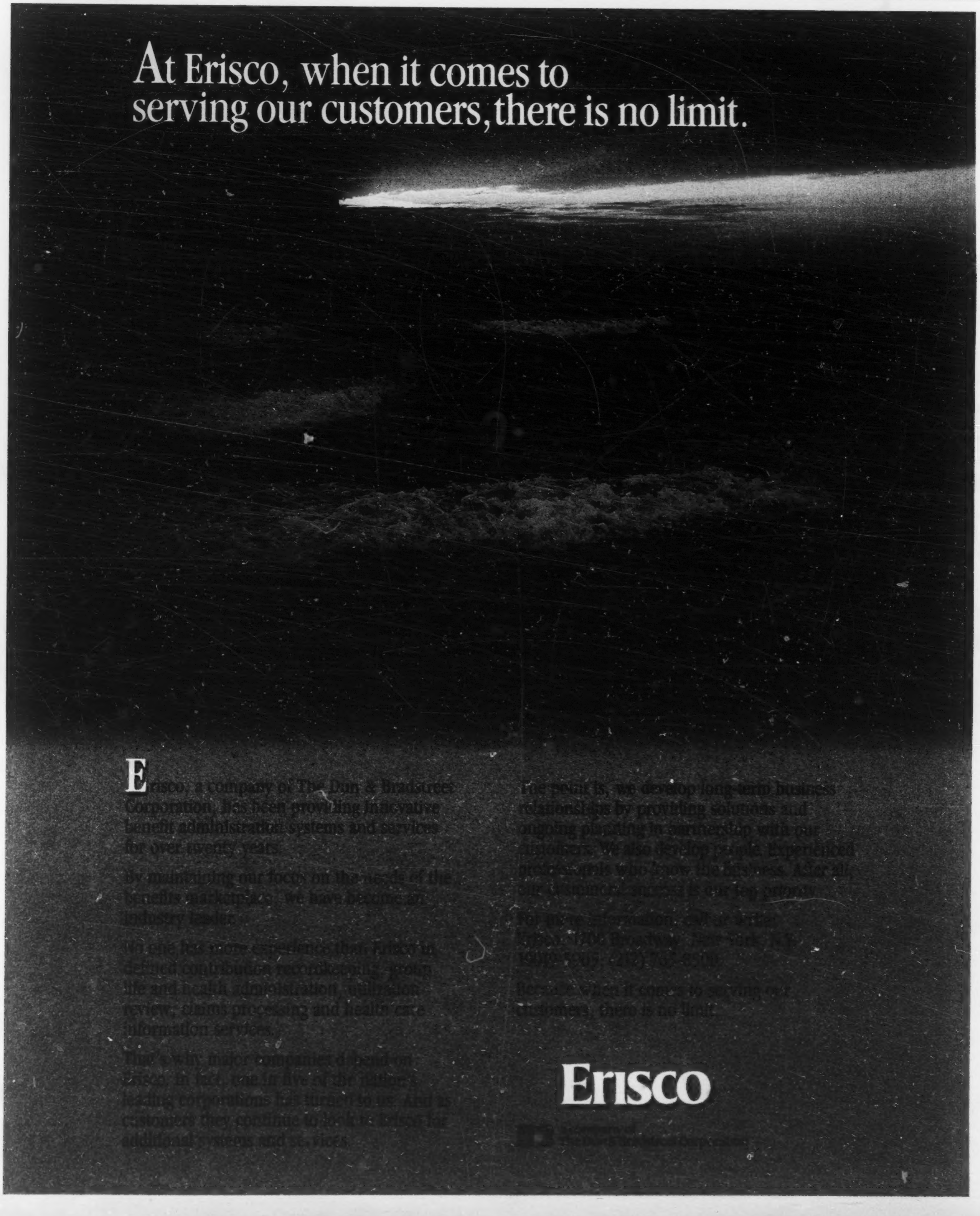
Fund	($ millions)
Teamsters, Central States	9,849
Teamsters, Western	9,084
UMWA	5,300
Nat'l Electrical Contractors	3,675
Hospital/Healthcare	2,241
Bakery & Confectionery	2,175
Operating Engineers	2,159
Southern California UFCW	2,133
Boilermaker/Blacksmith	2,132
I.A.M. National Pension	1,695
Plumbers National HQ	1,615
Total	**42,058**

Largest defined benefit plans

Fund	($ millions)
California Employees	54,000
New York City	45,422
New York State & Local	44,238
General Motors	35,500
AT&T	33,376
California State Teachers	30,335
New York State Teachers	28,130
General Electric	24,318
New Jersey	24,278
Texas Teachers	23,500
IBM	22,500
Wisconsin State Board	20,033
Ohio Public Employees	19,305
Florida State Board	18,700
Ford Motor	18,100
Ohio State Teachers	18,059
State of Michigan	17,948
North Carolina	16,791
Pennsylvania Schools	15,430
NYNEX	13,262
E.I. du Pont de Nemours	12,945
Washington State Board	12,660
Ameritech	12,100
Minnesota State Board	11,890
University of California	11,736
Total	**584,556**

Largest defined contribution plans

Fund	($ millions)
TIAA-CREF	81,000
AT&T	9,324
E.I. du Pont de Nemours	5,736
General Motors	5,400
Sears, Roebuck	5,127
Procter & Gamble	4,800
Ford Motor	4,700
General Electric	4,594
Federal Retirement Thrift	4,319
Exxon	4,252
Boeing	4,210
Shell Oil	4,140
IBM	3,275
Xerox	3,191
NYNEX	2,800
Chevron	2,790
Lockheed	2,679
Rockwell International	2,500
Philip Morris	2,310
BellSouth	2,300
Halliburton	2,270
United Technologies	2,256
Ameritech	2,200
Eastman Kodak	2,200
Texas Municipal	2,200
Total	**170,573**



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SPECIAL REPORT

Top 200 funds with defined benefit assets managed internally

($ millions)

Fund	Total	Equities	Bonds	Short-term	Real estate	Other
California Employees	45,600	17,700	23,400	1,200	3,300	0
New York State & Local	36,919	15,968	16,690	1,273	399	2,589
New York State Teachers	25,374	13,748	9,047	745	0	1,834
New Jersey	24,278	11,818	8,283	997	0	3,180
Texas Teachers	23,500	10,000	11,000	200	0	2,300
General Electric	22,818	11,363	6,306	978	1,977	2,194
Wisconsin State Board	20,033	11,183	6,921	1,357	572	0
Ohio Public Employees	18,659	4,079	11,033	3,520	0	27
Ohio State Teachers	17,650	5,402	8,432	2,169	1,625	22
State of Michigan	17,341	7,033	4,892	3,350	885	1,181
California State Teachers	15,908	0	13,796	2,112	0	0
E.I. du Pont de Nemours	12,806	6,960	4,597	1,249	0	0
IBM	12,600	na	na	na	na	na
Florida State Board	11,979	3,837	5,598	1,793	751	0
University of California	11,736	8,295	3,327	114	0	0
North Carolina	10,764	0	9,036	11	0	1,717
USX	9,500	5,500	2,400	1,375	225	0
United Nations Joint Staff	8,414	3,634	3,074	750	956	0
Maryland State Systems	8,328	2,337	5,768	223	0	0
Colorado Employees	8,075	2,812	3,721	642	457	443
Tennessee Consolidated	8,075	2,749	4,058	476	0	792
Alabama Systems	7,884	729	4,106	786	12	2,251
South Carolina	7,072	0	6,447	625	0	0
Washington State Board	6,743	0	4,366	1,148	1,229	0
Texas Employees	5,969	1,621	4,175	173	0	0
Minnesota State Board	5,123	558	4,437	128	0	0
Prudential Insurance	4,691	2,408	1,385	370	484	44
Ameritech	3,550	1,100	650	800	1,000	0
Oregon Public Employes	3,505	0	2,978	57	470	0
Bethlehem Steel	3,125	970	1,910	220	0	25
General Dynamics	2,700	500	2,200	0	0	0
Sears, Roebuck	2,666	1,763	774	34	0	95
GTE	2,528	848	1,680	0	0	0
Metropolitan Life	2,446	616	1,507	0	323	0
Alaska Retirement Systems	2,418	0	1,754	471	0	193
Utah State Retirement	2,380	926	1,360	0	94	0
Textron	2,100	334	1,022	299	208	237
Union Carbide	2,059	499	1,445	0	61	54
Commonwealth Edison	2,030	1,076	868	86	0	0
AT&T	2.024	0	0	0	1,215	809
Grumman	2,010	850	710	450	0	0
Deere	1,900	1,415	485	0	0	0
New Mexico Educational	1,890	106	1,647	137	0	0
Ohio Police & Firemen	1,839	0	1,681	158	0	0
Ohio School Employees	1,770	234	534	193	148	661
Aetna	1,730	1,107	104	18	104	397
New York City	1,675	0	622	1,053	0	0
Westinghouse Electric	1,633	908	651	51	0	23
Travelers	1,554	637	162	71	73	611
Virginia Supplemental	1,486	947	0	519	20	0
Exxon	1,425	1,025	376	9	0	15
NYNEX	1,412	686	726	0	0	0
U S WEST	1,400	1,400	0	0	0	0
San Francisco City/County	1,328	116	1,212	0	0	0
Kentucky Retirement Systems	1,300	430	39	831	0	0
Connecticut Trust Funds	1,275	0	838	394	0	43
Allied-Signal	1,259	459	600	200	0	0
Illinois State Board	1,200	200	1,000	0	0	0
CIGNA	1,194	694	369	42	89	0
Chase Manhattan	1,161	248	95	0	23	795
Shell Oil	1,115	313	690	112	0	0
Ford Motor	1,000	0	1,000	0	0	0
Hughes Aircraft	1,000	650	350	0	0	0
Equitable Life	940	218	638	6	78	0
Hawaii State Employees	922	14	125	142	278	363
New York Life	907	0	907	0	0	0
Nat'l Rural Electric Co-op	882	397	298	187	0	0
BellSouth	879	0	0	879	0	0
Pennsylvania Schools	858	0	858	0	0	0
Armco	766	0	575	191	0	0
Trans World Airlines	690	437	181	72	0	0
UMWA	650	0	500	150	0	0
Martin Marietta	633	186	174	273	0	0
Chrysler	558	558	0	0	0	0
Louisiana State Employees	542	0	324	218	0	0
Louisiana Teachers	520	0	0	520	0	0
Digital Equipment	500	na	na	na	na	na
BP America	468	314	125	29	0	0
Delta Air Lines	450	190	260	0	0	0
Chevron	414	0	0	414	0	0
Los Angeles City	316	0	0	316	0	0
Arkansas Teachers	314	0	0	314	0	0
Kentucky Teachers	262	0	216	5	41	0
American Airlines	250	50	100	100	0	0
K mart	237	0	237	0	0	0
Rhode Island	230	0	0	230	0	0
Caterpillar	225	225	0	0.	0	0
Presbyterian Church	200	0	0	200	0	0
Detroit Systems	195	0	0	195	0	0
Navistar	176	0	122	54	0	0
Los Angeles Fire & Police	157	0	0	157	0	0
United Methodist Church	149	0	138	8	3	0
Illinois Municipal	145	0	0	145	0	0
Oklahoma Teachers	144	0	0	144	0	0
TRW	129	115	0	14	0	0
Teamsters, Central States	117	0	0	117	0	0
Arizona State Retirement	110	0	0	110	0	0
Boilermaker/Blacksmith	107	na	na	na	na	na
Los Angeles Water & Power	100	0	0	100	0	0
Mississippi Public Employees	100	0	0	100	0	0
Kansas Public Employees	92	0	47	45	0	0
Iowa Public Employees	88	0	0	88	0	0
Monsanto	70	0	70	0	0	0
Los Angeles County	69	0	69	0	0	0
Chicago Municipal	50	0	0	50	0	0
Texaco	50	0	50	0	0	0
S. California UFCW	46	0	0	36	4	6
Southern Baptist	39	0	0	0	18	21
United Parcel Service	35	11	0	0	11	13
Idaho Public Employees	25	0	0	25	0	0
Minnesota Mining and Mfg.	24	0	22	0	0	2
Bank of America	6	0	0	0	6	0
New Mexico Public Employees	6	0	4	2	0	0
Total	**490,768**	**173,506**	**224,374**	**39,605**	**17,139**	**22,937**

the same period, to $1.26 billion from $1.062 billion. Defined contribution assets increased 6%, to $529 million from $499 million.

Equity managers: Domestic — BEA; Manning & Napier; W.H. Reaves; Fayez Sarofim; State Street Research; Robert Torray; and Wellington.

Fixed-income managers: Domestic — BEA; Stamford Capital; and Wellington.

Real estate manager: Fayez Sarofim.

The master trustee is Bank of New York; the investment consultant is Buck.

Key personnel overseeing the investment management of the fund are G.P. Maloney, senior vice president-finance, and J.H. Shepard, manager-corporate benefit funds.

American Information Technologies Corp.

	($ millions)
Total assets	14,300
Defined benefit	12,100
Defined contribution	2,200
401(k)	2,200
Employer DB contributions	0
Benefit payments	400
Employer DC contributions	60
Internally managed assets:	
Total DB	3,550
Hedging devices used:	
Stock options	
Bond options	
Stock index futures	
Fixed-income futures	
Short selling	
Defined benefit asset mix:	
Stocks	50%
Fixed income	40%
Cash equivalents	1%
Real estate equity	8%
Venture capital	1%
Defined contribution asset mix:	
Company stock	36%
Other stock	25%
GICs/BICs	39%

CHICAGO — As of Sept. 30, American Information Technologies Corp.'s total employee benefit assets increased 18.2% to $14.3 billion from $12.1 billion a year earlier. Defined benefit assets increased 16.3% during the same period, to $12.1 billion from $10.4 billion. Defined contribution assets increased 29.4%, to $2.2 billion from $1.7 billion.

Managers: — AmeriTrust; Bankers Trust; Baring International; Brinson Partners; Capital Guardian; Concord Capital; David J. Greene; Delaware Investment; First Wisconsin Asset; First Wisconsin Trust; Goldman, Sachs Asset; Harris Derivative; Henry Kaufman; IDS International; INVESCO; Jennison Associates; Lincoln Capital; Loomis, Sayles; Lord, Abbett; National Investment Services of America; Neuberger & Berman; RCM; Sit; and Travelers.

The master trustee and the global custodian is Harris Trust; the investment consultant is Callan.

Key personnel overseeing the investment management of the fund are Donald W. Phillips, chief investment officer; Harry A. Malone, director-benefit finance; and Lloyd B. Thompson, director-real estate.

American Stores Co.

	($ millions)
Total assets	1,882
Defined benefit	50
Defined contribution	1,832
Profit-sharing	1,832
Employer DB contributions	.144
Benefit payments	.60
Employer DC contributions	63
Hedging devices used:	
Stock options	
Stock index futures	
Fixed-income futures	
Defined benefit asset mix:	
Stocks	11%
Fixed income	86%
Cash equivalents	3%
Defined contribution asset mix:	
Other stock	45%
Fixed income	43%
Cash equivalents	5%
Real estate	7%

SALT LAKE CITY, Utah — As of Sept. 30, American Stores Co.'s total employee benefit assets increased 16% to $1.882 billion from $1.623 billion a year earlier. Defined benefit assets decreased 40.5% during the same period, to $50 miliion from $84 million. Defined contribution assets increased 19% to $1.832 billion from $1.539 billion.

Equity managers: Domestic — Institutional Capital; Lazard Freres; RCM; Templeton; and Wells Fargo.

International — Baring International; Nomura; Rowe Price-Fleming; and Templeton.

Fixed-income managers: Domestic — Neuberger & Berman; PIMCO; and Western Asset.

Real estate managers: Coldwell Banker; Hancock; LaSalle; and RREEF.

Other manager: Equitable.

The master trustee and global custodian is Bankers Trust; the investment consultant is Evaluation Associates.

Key personnel overseeing the investment management of the fund are Scott Bergeson, senior vice president; and Duane Whitney, controller.

American Telephone & Telegraph Co.

	($ millions)
Total assets	42,700
Defined benefit	33,376
Defined contribution	9,324
Thrift or savings plan	8,421
ESOP	903
Employer DB contributions	338
Benefit payments	1,148
Employer DC contributions	590
Internally managed assets:	
Total DB	2,024
Hedging devices used:	
Stock index futures	
Defined benefit asset mix:	
Stocks	58%
Fixed income	26%
Real estate equity	12%
Other	4%
Defined contribution asset mix:	
Company stock	43%
Other stock	19%
Fixed income	9%
GICs/BICs	29%

NEW YORK— As of Sept. 30, American Telephone & Telegraph Co.'s total employee benefit assets increased 21.5% to $42.7 billion from $35.143 billion a year earlier. Defined benefit assets increased 16.3% during the same period, to $33.376 billion from $28.691 billion. Defined contribution assets increased 44.5%, to $9.324 billion from $6.452 billion.

Managers: Abbott Capital; ABD; AEW; Bankers Trust; Batterymarch; Boston Co. Real Estate; Brown Brothers Harriman; Butler Capital; Capital Guardian; Chancellor Trust; Chase Investors; Chemical; Coldwell Banker; Copley; Corporate Property Investors; Denver Investment Advisors; Discount Corp.; Dusco; Eastdil; Equitable; Fidelity International; First Reserve; First Wachovia; Goldman, Sachs; G.T. Capital; John Hancock; Heitman; INVESCO; Investment Counselors of Maryland; Ivory & Sime; Jennison; JMB; Karsten; Lincoln Capital; Loomis, Sayles; Lord, Abbett; Mitchell Hutchins; Mellon Bank; J.P. Morgan; Morgan Grenfell; NCNB Texas; O'Connor Management; PIMCO; Posthorn Global; Prudential Asset; RREEF; RCM; Standish, Ayer & Wood; State Street Bank; State Street Research; United Capital; Wachovia Bank; Warburg, Pincus; Wellington; and Western Asset.

The trustees for the AT&T master pension trust are Bankers Trust, Chase Manhattan, Citibank, Mellon Bank, Northern Trust and State Street Bank. The global custodian is Chase Manhattan; the investment consultant is Frank Russell.

Key personnel overseeing the investment management of the fund are David Feldman, corporate vice president; and Robert Angelica and Ronald Roessler, directors.

Amoco Corp.

	($ millions)
Total assets	4,581
Defined benefit	2,590
Defined contribution	1,991
Other	1,991
Employer DB contributions	0
Benefit payments	185
Employer DC contributions	60

Hedging devices used:	
Bond options	
Stock index futures	
Fixed-income futures	
Defined benefit asset mix:	
Stocks	68%
Fixed income	13%
Cash equivalents	9%
Real estate equity	5%
Other	5%

CHICAGO — As of Sept. 30, Amoco Corp.'s total employee benefit assets increased 14.1% to $4.581 billion from $4.014 billion a year earlier. Defined benefit assets increased 16.9% during the same period, to $2.59 billion from $2.214 billion. Defined contribution assets increased 10.6%, to $1.991 billion from $1.8 billion.

Equity managers: Domestic — Chase Investors; DFA; Fidelity Management; Forstmann-Leff; Franklin Portfolio; Fayez Sarofim; and State Street Research.

International — Acadian; Boston International; and State Street Bank.

Fixed-income managers: Fischer, Francis, Trees & Watts; PIMCO; and Security Capital.

Real estate managers: Corporate Property Investors and Equitable.

The master trustee and global custodian is Chase Manhattan.

Key personnel overseeing the investment management of the fund are Marvin L. Damsma, director-pension administration, and John S. Ruey, administrative manager-investments.

Anheuser-Busch Cos. Inc.

	($ millions)
Total assets	1,670
Defined benefit	995
Defined contribution	675
401(k)	616
Other	59
Employer DB contributions	8
Employer DC contributions	16
Defined benefit asset mix:	
Stocks	51%
Fixed income	38%
Cash equivalents	2%
Real estate equity	5%
GICs/BICs	1%
Private placement	3%
Defined contribution asset mix:	
Company stock	91%
Other stock	2%
Cash equivalents	4%
GICs/BICs	3%

ST. LOUIS — As of Sept. 30, Anheuser-Busch Cos. Inc.'s total employee benefit assets increased 56.8% to $1.67 billion from $1.065 billion a year earlier. Defined benefit assets increased 56.7% to $995 million from $635 million during the same period. Defined contribution assets totaled $675 million; a comparable figure for the previous year was not available.

Equity managers: Domestic — Dillon, Read; Mellon Capital; and Russell Trust.

Fixed-income managers: Domestic — Boatmen's; Equitable; General American; J.P. Morgan; and Russell Trust.

Real estate managers: Aetna; Equitable; JMB; and LaSalle.

The master trustee is Boatmen's Trust.

Key personnel overseeing the investment management of the fund are Jerry Ritter, vice president and group executive; Gerald Thayer, vice president and treasurer; and Pamela Moench, manager-pension investment.

Arizona State Retirement System

	($ millions)
Total assets	7,612
Defined benefit	7,612
Employer DB contributions	155
Benefit payments	212
Internally managed assets	110
Defined benefit asset mix:	
Stocks	40%
Fixed income	39%
Cash equivalents	18%
Mortgages	3%

PHOENIX, Ariz. — As of Sept. 30, the Arizona State Retirement System's total employee benefit assets increased 18.4% to $7.612 billion from $6.429 billion a year earlier. All assets are defined benefit.

Equity managers: Domestic — Boston Co.; IDS; INVESCO; J.P. Morgan; and Wells Fargo.

International — State Street Bank and Warburg.

Fixed-income managers: Domestic — Boston Co.; Duff & Phelps; IDS; INVESCO; J.P. Morgan; and Wells Fargo.

Mortgage manager: Valley National Bank.

The master custodian is Mellon Bank; the global custodians are Mellon and State Street Bank; the investment consultant is Mercer Meidinger Hansen.

Key personnel overseeing the investment management of the fund are Edwin C. Gallison, director, and Douglas Lemon, assistant director.

Arkansas Teacher Retirement System

	($ millions)
Total assets*	2,166
Defined benefit	2,166
Employer DB contributions	88
Benefit payments	90

**as of Aug. 31, 1989*

Internally managed assets	314
Defined benefit asset mix:	
Stocks	33.6%
Fixed income	50.5%
Cash equivalents	15.9%

LITTLE ROCK, Ark. — As of Aug. 31, the Arkansas Teacher Retirement System's total employee benefit assets increased 18.6% to $2.166 billion from $1.827 billion as of July 30, 1988. All assets are defined benefit.

Equity manager: Domestic — Oppenheimer.

Fixed-income manager: Domestic — Commercial Management.

The master custodian is First Commercial Bank; the investment consultant is Shearson Lehman Hutton.

Key personnel overseeing the investment management of the fund are Mavolene C. Booth, investment manager, and Bill A. Shirron, executive director.

Armco Inc.

	($ millions)
Total assets	2,156
Defined benefit	1,917
Defined contribution	239
Other	239
Employer DB contributions	78
Benefit payments	177
Employer DC contributions	7
Internally managed assets:	
Total DB	766
Defined benefit asset mix:	
Stocks	52.3%
Fixed income	33.3%
Cash equivalents	13%
Real estate equity	0.2%
GICs/BICs	0.9%
Venture capital	0.3%
Defined contribution asset mix:	
Company stock	44%
Other stock	4%
GICs/BICs	52%

MIDDLETOWN, Ohio — As of Sept. 30, Armco Inc.'s total employee benefit assets increased 14.1% to $2.156 billion from $1.889 billion a year earlier. Defined benefit assets increased 15.7% during the same period, to $1.917 billion from $1.657 billion. Defined contribution assets increased 3%, to $239 million from $232 million.

Equity managers: Domestic — Alliance; Capital Guardian; Columbus Circle; Lincoln Capital; Mellon Capital; and Miller Anderson & Sherrerd.

International — Oechsle.

Real estate manager: RREEF.

GIC manager: John Hancock.

Private placements manager: Equitable.

Venture capital managers: Allsop; Brentwood; Concord Partners; DSV; and North American Private Equity.

The master trustee and global custodian is Chase Manhattan; the investment consultant is SEI.

The key person overseeing the investment management of the fund is Dennis Furey, general manager-investment management.

Top 200 funds with defined contribution assets managed internally

($ millions)

Fund	Total	Equities	Bonds	Short-term	Real estate	Other
TIAA-CREF	81,000	36,000	38,000	3,000	3,000	1,000
Sears, Roebuck	5,019	1,226	724	859	0	2,210
Federal Retirement Thrift	4,257	0	0	4,257	0	0
Procter & Gamble	3,500	3,500	0	0	0	0
Shell Oil	3,118	0	3,118	0	0	0
General Electric	3,054	417	2,540	97	0	0
Exxon	2,422	0	0	2,422	0	0
Texas Municipal	2,200	0	2,200	0	0	0
General Dynamics	1,500	0	200	0	0	1,300
Evangelical Lutheran	1,407	448	959	0	0	0
Prudential Insurance	1,351	211	1,140	0	0	0
University of California	1,164	301	86	735	0	42
Hughes Aircraft	1,100	0	0	1,100	0	0
Aetna	973	354	0	0	0	619
Metropolitan Life	947	137	791	0	0	19
Halliburton	896	0	0	0	33	863
J.C. Penney	775	0	0	0	0	775
Tenneco	750	135	0	587	0	28
Equitable Life	699	130	546	0	3	20
CIGNA	581	NA	NA	NA	NA	NA
Chase Manhattan	523	220	73	230	0	0
Travelers	521	24	321	0	0	176
Bechtel Power	435	83	154	198	0	0
Eli Lilly	315	0	0	0	0	315
New Jersey	248	172	22	54	0	0
New York Life	224	40	136	7	0	41
USX	200	160	40	0	0	0
United Parcel Service	136	72	0	0	37	27
Minnesota State Board	69	0	69	0	0	0
American Airlines	50	0	0	50	0	0
Detroit Systems	31	0	0	31	0	0
Consolidated Natural Gas	20	0	0	20	0	0
Navistar	3	3	0	0	0	0
Total	**119,488**	**43,633**	**51,119**	**13,647**	**3,073**	**7,435**

Atlantic Richfield Co.

	($ millions)
Total assets	3,541
Defined benefit	2,388
Defined contribution	1,153
Defined benefit asset mix:	
Stocks	74%
Fixed income	24%
Cash equivalents	2%
Defined contribution asset mix:	
Stock	68.3%
Fixed income	0.4%
Cash equivalents	31.3%

LOS ANGELES — As of Sept. 30, the Atlantic Richfield Co.'s total employee benefit assets increased 18.9% to $3.541 billion from $2.977 billion a year earlier. Defined benefit assets increased 13% during the same period, to $2.388 billion from $2.113 billion. Defined contribution assets increased 33.4% to $1.153 billion from $864 million.

The key person overseeing the investment management of the fund is E. Kent Damon Jr., president and chief investment officer of ARCO Investment Management Co.

B

Bakery & Confectionary Union & Industry International Pension Funds

	($ millions)
Total assets	2,175
Defined benefit	2,175
Employer DB contributions	150
Benefit payments	160
Defined benefit asset mix:	
Stocks	45.8%
Fixed income	37.3%
Cash equivalents	6.5%
Mortgages	8.1%
GICs/BICs	1.9%
Other	0.4%

KENSINGTON, Md. — As of Sept. 30, the Bakery & Confectionery Union & Industrial International Pension Funds' total employee benefit assets increased 17.6% to $2.175 billion from $1.849 billion a year earlier. All assets are defined benefit.

Balanced managers: Lazard Freres; Loomis, Sayles; M.D. Sass; Stein, Roe & Farnham; Trust Co. of the West; and Wertheim.

The master custodian is Mercantile Safe Deposit.

Key personnel overseeing the investment management of the fund are John Fleming, administrative director, and Richard Swift, director of investments.

Bank of America

	($ millions)
Total assets	1,633
Defined benefit	930
Defined contribution	703
401(k)	677
Other	26
Employer DB contributions	265
Benefit payments	119
Employer DC contributions	29
Internally managed assets:	
Total DB	6
Hedging devices used:	
Bond options	
Stock index futures	
Fixed-income futures	
Defined benefit asset mix:	
Stocks	55%
Fixed income	37%
Cash equivalents	5%
Real estate equity	1%
Annuities	1%
Other	1%
Defined contribution asset mix:	
Company stock	68%
Other stock	9%
Fixed income	4%
Cash equivalents	7%
GICs/BICs	12%

SAN FRANCISCO — As of Sept. 30, Bank of America's total employee benefit assets were $1.633 billion, with $930 million in defined benefit assets and $703 million in defined contribution assets.

Equity managers: Domestic — Alliance; Associated Capital; Mellon Capital; and Wellington Trust.

International — State Street Bank and WorldInvest.

Fixed-income managers: Domestic — Criterion; Standish, Ayer & Wood; and Western Asset.

International — WorldInvest.

Real estate managers: Coldwell Banker.

Other managers: KKR; Oak Investment; and Weiss, Peck & Greer.

The master trustee and global custodian is Bank of America; the investment consultant is Frank Russell.

Key personnel overseeing the investment management of the fund are Joel Damon, vice president, and Rich Krivcher, assistant vice president.

Bechtel Power Corp.

	($ millions)
Total assets	1,655
Defined contribution	1,655
Profit-sharing	507
401(k)	1,148
Internally managed assets	435
Hedging devices used:	
Stock options	
Stock index futures	
Fixed-income futures	
Defined contribution asset mix:	
Other stock	36%
Fixed-income	22%
Cash equivalents	11%
GICs/BICs	2%
Other	29%

SAN FRANCISCO — As of Sept. 30, Bechtel Power Corp.'s total employee benefit assets increased 16.8% to $1.655 billion from $1.417 billion a year earlier. All assets are defined contribution.

Equity managers: Domestic — Batterymarch; BEA Associates; Columbia; Dodge & Cox; Morgan Grenfell; Matrix Capital; Sierra Asset; Sit; Wellington; and Wells Fargo.

International — Boston International; J.P. Morgan; and Wells Fargo.

Fixed-income managers: Domestic — Columbia, PIMCO and Sierra Asset.

International — Morgan Guaranty and Wells Fargo.

Real estate managers: Aetna; Cabot, Cabot & Forbes; Corporate Property Advisors; Prudential; and RREEF.

Other manager: Bailard, Biehl & Kaiser.

The master trustee and global custodian is Bankers Trust; the investment consultant is Sierra Asset Management.

Key personnel overseeing the investment management of the fund are investment managers David L. Redo and Vincent P. Kuhn Jr.

Bell Atlantic Corp.

	($ millions)
Total assets*	13,635
Defined benefit	11,550
Defined contribution	2,085
Thrift or savings	86
401(k)	1,824
ESOP	175

**P&I estimate*

PHILADELPHIA — As of Sept. 30, Bell Atlantic Corp.'s employee benefit assets totaled $13.635 billion, according to P&I calculations. The estimate is based on $11.541 billion in assets the company reported as of Dec. 31, 1988. That amounts to an estimated 26.1% increase from the $10.816 billion Bell Atlantic reported Aug. 31, 1988. Defined benefit assets were an estimated $11.55 billion and defined contribution assets $2.085 billion for the same period.

The master trustee of the pension trust is Mellon Bank; the global custodian is State Street Bank & Trust; the investment consultant is Frank Russell.

Other trustees/custodians are Bankers Trust and Midlantic National Bank.

Key personnel overseeing the investment management of the fund are Joseph A. Bobrowski, executive director-trust administration, and Edward P. Rennie, executive director-trust investments.

BellSouth Corp.

	($ millions)
Total assets	12,843
Defined benefit	10,543
Defined contribution	2,300
Other	2,300
Internally managed assets:	
Total DB	879

ATLANTA — As of Sept. 30, BellSouth Corp.'s total employee benefit assets increased 22.3% to $12.843 billion from $10.505 billion a year earlier. Defined benefit assets increased 20% during the same period, to $10.543 billion from $8.785 billion. Defined contribution assets increased 33.7%, to $2.3 billion from $1.72 billion.

Managers: Aetna; AEW; Alliance; AmSouth; Bankers Trust; Barnett Banks; Brown Brothers Harriman; C&S Investment; Connecticut General; DFA; First Kentucky Co.; First Tennessee Investment; First Union National; Greaves Capital; INVESCO; Investment Research; Jennison; Lehman Management; Massachusetts Mutual; Metropolitan Life; Mutual Benefit Life; NCNB; PIMCO; Pension Realty Advisors; Provident National Assurance; Prudential Asset; Richmond Capital; South Carolina National; Southeastern Asset; State Street Bank; Sun Banks; TREET; Travelers; Wachovia; and Wells Fargo.

The master trustee for the pension trust is Wachovia; for the savings plan, Bankers Trust.

Key person overseeing the investment management of the fund is Kincaid Patterson, director-trust assets.

Bethlehem Steel Corp.

	($ millions)
Total assets	3,155
Defined benefit	3,155
Employer DB contributions	700
Benefit payments	470
Internally managed assets	3,125
Defined benefit asset mix:	
Stocks	32%
Fixed income	60%
Cash equivalents	7%
GICs/BICs	1%

BETHLEHEM, Pa. — As of Sept. 30, Bethlehem Steel Corp.'s total employee benefit assets increased 15.9% to $3.155 billion from $2.722 billion a year earlier. All of the assets are defined benefit.

Equity managers: International — Putnam and J.P. Morgan.

The master trustee is Bankers Trust.

The key person overseeing the investment management of the fund is Gerard Mead, pension fund manager.

Boeing Co.

	($ millions)
Total assets*	11,001
Defined benefit	6,791
Defined contribution	4,210

**P&I estimate*

SEATTLE — As of Sept. 30, *Pensions & Investments* estimates Boeing Co. had $11.001 billion in employee benefit assets, of which $6.791 billion was defined benefit and $4.21 billion was defined contribution.

Key personnel overseeing the investment management of the fund are Gary Bland, vice president-trust investments and investor relations, and Terry Teague, manager-trust investments.

Special report on employee benefit trends: April 2.

Top 200 funds with assets in oil & gas

Defined benefit

Fund	($ millions)
AT&T	265
Minnesota State Board	96
Washington State Board	86
GTE	85
U S WEST	50
Textron	46
Honeywell	43
Southwestern Bell	42
Exxon	31
Ford Motor	30
ITT	16
S. New England Telephone	16
Chase Manhattan	15
USX	12
Aluminum Co. of America	4
Maine State Retirement	3
General Electric	2
Owens-Illinois	1
Xerox	1
Total	**844**

Defined contribution

Fund	($ millions)
Xerox	15
Evangelical Lutheran	3
Total	**18**

401(K)
Defined contribution plans, specifically 401(k) plans, have become indispensable means of attracting and retaining key employees.
EMPLOYEE COMMUNICATIONS
GIC
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Board of Trustees, Boilermaker Blacksmith National Pension Trust

	($ millions)
Total assets*	2,132
Defined benefit*	2,132
Employer DB contributions*	57

**From Money Market Directory*

KANSAS CITY, Kan. — The Board of Trustees, Boilermaker Blacksmith National Penison Trust's total employee benefits were $2.132 billion as of June 1989, according to Money Market Directory.

David Hansen, financial director, oversees the investment management of the fund.

BP America Inc.

	($ millions)
Total assets	2,218
Defined benefit	1,385
Defined contribution	833
401(k)	833
Employer DB contributions	56
Benefit payments	100
Employer DC contributions	25
Internally managed assets:	
Total DB	468
Hedging devices used:	
Fixed-income futures	
Defined benefit asset mix:	
Stocks	61.2%
Fixed income	25.1%
Cash equivalents	3%
Real estate equity	8.4%
Venture capital	2.3%
Defined contribution asset mix:	
Company stock	5.6%
Other stock	20.3%
Fixed income	0.3%
Cash equivalents	0.3%
GICs/BICs	73.5%

CLEVELAND — As of Sept. 30, BP America Inc.'s total employee benefit assets increased 17.8% to $2.218 billion from $1.883 billion a year earlier. Defined benefit assets increased 19.8% during the same period, to $1.385 billion from $1.156 billion. Defined contribution assets increased 14.6%, to $833 million from $727 million.

Equity managers: Domestic — Alliance; Mellon Capital; United Capital; and Value Line.

International — Baring International; Boston International; and Mellon Capital.

Fixed-income manager: Domestic — Mellon Capital.

Real estate managers: Aetna; Equitable; Sentinel; TCW.

Other manager: Mitchell Hutchins.

The master trustee and global custodian is Bankers Trust; the investment consultant is Frank Russell.

Key personnel overseeing the investment management of the fund are R.F. Chase, executive vice president and chief financial officer; and H.W. Harpster, director-pension investments.

C

California Public Employees' Retirement System

	($ millions)
Total assets	54,000
Defined benefit	54,000
Employer DB contributions	1,479
Internally managed assets	45,600
Defined benefit asset mix:	
Stocks	46.9%
Fixed income	38.5%
Cash equivalents	3.7%
Real estate equity	6.2%
Mortgages	4.7%

SACRAMENTO, Calif. — As of Sept. 30, the California Public Employees' Retirement System's total employee benefit assets increased 17.5% to $54 billion from $45.94 billion a year earlier. All assets are defined benefit.

Equity managers: Domestic — Atalanta/Sosnoff; Batterymarch; Brinson Partners; Chancellor; DFA; Lazard Freres; RCM; Roll & Ross; and TSA.

International — Baring International; Brinson Partners; County NatWest; Fidelity International; Fiduciary Trust; Morgan Grenfell; Nomura; Oechsle; Schroder Capital; State Street Bank; TCW; and Warburg Investment.

The master and global custodian is Boston Safe Deposit & Trust; the investment consultant is Wilshire Associates.

Key personnel overseeing the investment management of the fund are DeWitt Bowman, chief investment officer, and Basil J. Schwan and Walton R. Williams, principal investment officers.

California State Teachers' Retirement System

	($ millions)
Total assets	30,335
Defined benefit	30,335
Employer DB contributions	827
Benefit payments	1,355
Internally managed assets	15,908
Hedging devices used:	
Stock index futures	
Defined benefit asset mix:	
Stocks	43.4%
Fixed income	43.5%
Cash equivalents	7%
Real estate equity	3.9%
Mortgages	2%
Other	0.2%

SACRAMENTO, Calif. — As of Sept. 30, the California State Teachers' Retirement System's total employee benefit assets increased 22.7% to $30.335 billion from $24.721 billion a year earlier. All assets are defined benefit.

Equity managers: Domestic — Barrow, Hanley, Mewhinney & Strauss; Denver Investment Advisors; Pilgrim, Baxter, & Greig; Provident Investment; TCW; Trinity; Wells Fargo; Wilmington Capital; and Wright Investors.

Real estate managers: Equitable; Lehndorff and Babson; and TCW.

The master custodian is State Street Bank; the investment consultant is Pension Consulting Alliance; the real estate consultant is Institutional Property Consultants; the alternative investments consultant is Abbott Capital Management.

Key personnel overseeing the investment management of the fund are Thomas E. Flanigan, chief investment officer; Sandra Parker, assistant chief executive officer; and James D. Mosman, chief executive officer.

Special report on global investing: April 30.

University of California

	($ millions)
Total assets	12,900
Defined benefit	11,736
Defined contribution	1,164
Other	1,164
Employer DB contributions	201
Benefit payments	15
Employer DC contributions	11
Internally managed assets:	
Total DB	11,736
Total DC	1,164
Defined benefit asset mix:	
Stocks	70.7%
Fixed income	28.3%
Cash equivalents	1%
Defined contribution asset mix:	
Other stock	25.9%
Fixed income	7.4%
Cash equivalents	63.1%
GICs/BICs	3.6%

BERKELEY, Calif. — As of Sept. 30, the University of California's total employee benefit assets increased 27.4% to $12.9 billion from $10.123 billion a year earlier. Defined benefit assets increased 28.2% during the same period, to $11.736 billion from $9.153 billion. Defined contribution assets increased 20%, to $1.164 billion from $970 million.

All the assets are managed internally.

The master trustee is Security Pacific.

Key personnel overseeing the investment management of the fund are Herbert Gordon, treasurer, and Patricia Small, associate treasurer.

Caterpillar Inc.

	($ millions)
Total assets	4,779
Defined benefit	4,154
Defined contribution	625
Thrift or savings	469
401(k)	156
Employer DB contributions	77
Benefit payments	233
Employer DC contributions	15
Internally managed assets:	
Total DB	225
Defined benefit asset mix:	

Top 200 funds with defined benefit assets in indexed equities and bonds

($ millions)

	Total	Indexed equities	Indexed bonds
New York City	32,110	10,681	21,429
California State Teachers	23,372	10,646	12,726
New York State & Local	15,968	15,968	0
New York State Teachers	13,748	13,748	0
AT&T	13,677	9,692	3,985
California Employees	13,000	13,000	0
NYNEX	5,666	4,344	1,322
General Electric	5,391	5,391	0
Florida State Board	5,254	5,254	0
Minnesota State Board	3,532	2,568	964
Ford Motor	3,500	3,300	200
Pennsylvania Schools	3,381	1,337	2,044
Maryland State Systems	3,332	3,038	294
Virginia Supplemental	3,172	3,172	0
Washington State Board	2,827	2,192	635
Pennsylvania Employes	2,731	2,165	566
Southwestern Bell	2,315	2,315	0
Exxon	2,170	1,695	475
Mississippi Public Employees	2,034	656	1,378
Arizona State Retirement	1,895	1,247	648
E.I. du Pont de Nemours	1,891	1,891	0
Rhode Island Retirement	1,794	1,104	690
Hospital/Healthcare	1,791	919	872
Illinois Teachers	1,702	1,308	394
Ameritech	1,590	870	720
Teamsters, Central States	1,508	1,056	452
Illinois State Universities	1,484	1,190	294
Operating Engineers	1,422	558	864
GTE	1,364	1,364	0
Westinghouse Electric	1,243	690	553
North Carolina	1,212	1,212	0
Colorado Employees	1,200	1,200	0
Tennessee Valley Authority	1,152	1,152	0
Sears, Roebuck	1,151	1,151	0
Connecticut Trust Funds	1,060	1,060	0
Commonwealth Edison	1,031	1,031	0
Los Angeles Fire & Police	990	990	0
Utah State Retirement	968	968	0
UMWA	950	450	500
Prudential Insurance	904	718	186
U S WEST	900	900	0
Philip Morris	884	884	0
Ohio School Employees	866	866	0
Indiana Public Employees	760	0	760
Tenneco	732	517	215
Shell Oil	720	495	225
World Bank	707	707	0
United Technologies	700	700	0
Nevada Public Employees	665	665	0
Unisys	611	611	0
Raytheon	609	609	0
Eastman Kodak	600	600	0
Illinois Municipal	595	595	0
Alabama Systems	572	572	0
Presbyterian Church	570	570	0
Chrysler	558	558	0
Idaho Public Employees	550	307	243
Iowa Public Employees	515	384	131
Honeywell	507	507	0
Nat'l Electrical Contractors	500	500	0
Texas Employees	499	499	0
Los Angeles City	490	490	0
New Mexico Public Employees	490	490	0
Pacific Gas & Electric	474	474	0
S. New England Telephone	431	385	46
Kentucky Retirement Systems	430	430	0
Maine State Retirement	407	407	0
San Francisco City/County	398	398	0
Ohio Police & Firemen	363	363	0
I.A.M. National Pension	352	89	263
Allied-Signal	326	326	0
Travelers	322	270	52
Anheuser-Busch	313	274	39
J.C. Penney	301	226	75
General Dynamics	300	200	100
United Methodist Church	296	274	22
Chevron	289	175	114
Bakery & Confectionery	285	160	125
Amoco	281	281	0
BP America	241	241	0
Kentucky Teachers	233	0	233
Aluminum Co. of America	226	226	0
Caterpillar	225	225	0
Cooper Industries	225	225	0
United Airlines	220	220	0
Bank of America	206	206	0
Mobil Oil	170	170	0
Philadelphia City	164	73	91
Eli Lilly	163	163	0
FPL Group	159	0	159
Southern California UFCW	159	159	0
State of Michigan	158	158	0
Nat'l Rural Electric Co-op	155	49	106
Hawaii State Employees	152	152	0
United Parcel Service	152	152	0
CIGNA	150	150	0
Armco	142	142	0
Delta Air Lines	140	140	0
Illinois State Board	140	140	0
Milwaukee City	130	130	0
New York Life	130	88	42
PPG Industries	115	115	0
Minnesota Mining & Mfg.	105	105	0
Phillips Petroleum	103	85	18
Louisiana State	100	0	100
American Electric Power	95	95	0
K mart	89	89	0
Alaska Retirement Systems	78	78	0
Procter & Gamble	71	37	34
Motorola	68	68	0
Southern California Edison	57	57	0
Aetna	49	49	0
Inland Steel	48	48	0
Detroit Systems	43	43	0
ITT	42	42	0
Hercules	38	38	0
Texaco	17	0	17
TRW	15	15	0
Owens-Illinois	11	0	11
Total	**210,634**	**155,222**	**55,412**

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and
One Office Building
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Realty Advisors

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Institutional Investment Group
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in the sale of
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Institutional Investment Group
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JMB REALTY CORPORATION
in the acquisition of
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The
Grubb&Ellis
Institutional Investment Group
is pleased to announce
the arrangement of a
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SAN FRANCISCO (415) 433-1050

Stocks	50%
Fixed income	26%
Cash equivalents	2%
Real estate equity	4%
Tactical asset allocation	18%
Defined contribution asset mix:	
Company stock	85%
GICs/BICs	15%

PEORIA, Ill. — As of Sept. 30, Caterpillar Inc.'s total employee benefit assets increased 15.5% to $4.779 billion from $4.138 billion a year earlier. Defined benefit assets increased 15.1% during the same period, to $4.154 billion from $3.61 billion. Defined contribution assets increased 18.4%, to $625 million from $528 million.

Equity managers: Domestic — Delaware; Jennison; Oppenheimer; PRIMECAP; and Trinity.

International — Baring International; Fidelity International; Mellon; and Mercator.

Fixed-income managers: Domestic — Chase Investors and J.P. Morgan.

Real estate managers: Aetna; Brinson Partners; Equitable; and LaSalle.

Other manager: Mellon Capital.

The master trustee and global custodian is Northern Trust; the investment consultant is Frank Russell.

Key personnel overseeing the investment management of the fund are Fred Dickinson, manager-employee benefit funds; and Brian Christensen, benefit funds coordinator.

Chase Manhattan Corp.

	$ millions)
Total assets	1,684
Defined benefit	1,161
Defined contribution	523
401(k)	523
Internally managed assets:	
Total DB	1,161
Total DC	523
Defined benefit asset mix:	
Stocks	21.3%
Fixed income	8.2%
Real estate equity	2%
Annuities	67.2%
Other	1.3%
Defined contribution asset mix:	
Stock	42%
Fixed income	14%
Cash equivalents	44%

NEW YORK — As of Sept. 30, Chase Manhattan Corp. had employee benefit assets totaling $1.684 billion. Defined benefit assets totaled $1.161 billion and 401(k) plan assets totaled $523 million.

Key personnel overseeing the investment management of the fund are J. Richard Zecher, chairman, Chase Investors Management Corp., and Howard A. Scribner Jr., vice chairman.

Chevron Corp.

	($ millions)
Total assets*	7,069
Defined benefit	4,279
Defined contribution	2,790
Profit-sharing	2,159
Thrift or savings	471
ESOP	160
Employer DB contributions	0.4
Benefit payments	275

**P&I estimate*

Hedging devices used:	
Fixed-income futures	
Defined benefit asset mix:	
Stocks	42%
Fixed income	23%
Cash equivalents	20%
Real estate equity	8%
GICs/BICs	7%
Defined contribution asset mix:	
Company stock	80%
Other stock	3%
Cash equivalents	3%
GICs/BICs	14%

SAN FRANCISCO — *Pensions & Investments* estimates that as of Sept. 30, Chevron Corp.'s total employee benefit assets were $7.069 billion, based on the $5.89 billion the company listed as of Dec. 31, 1988.

Equity managers: Domestic — Dodge & Cox; First Pacific; Franklin; Jennison; Merus; J.P. Morgan; RCM; and RIEM.

Fixed-income managers: Domestic — Discount Corp.; PIMCO; State Street; and STW.

Real estate managers: Equitable, Prudential and RREEF.

Other managers: Concord Partners; Hellman & Friedman; KKR; Mellon Capital; and Wells Fargo.

The master trustee is Bankers Trust; the investment consultant is Frank Russell.

Key personnel overseeing the investment management of the fund are M.R. Klitten, vice president-finance; R.G. Williamson, assistant comptroller; and N.G. Darling, manager-investment analysis.

Municipal Employees' Annuity & Benefit Fund of Chicago

	($ millions)
Total assets*	1,845
Defined benefit	1,845
Employer DB contributions	93
Benefit payments	135

**as of June 30, 1989*

Internally managed assets	50
Defined benefit asset mix:	
Stocks	44%

Fixed income	37%
Cash equivalents	10%
Real estate equity	4%
Venture capital	5%

CHICAGO — As of June 30, the Municipal Employees' Annuity & Benefit Fund of Chicago's total employee benefit assets increased 15.3% to $1.845 billion from $1.6 billion as of Sept. 30, 1988. All assets are defined benefit.

Equity managers: Domestic — Alliance; Ariel; Bankers Trust; Brinson Partners; Chicago Asset; Hawthorne; JCW; Oppenheimer; and Weiss, Peck & Greer.

International — Frank Russell.

Fixed-income managers: Domestic — Alliance; Bankers Trust; Brinson Partners; and JCW.

Real estate managers: Prudential and Trident Meyer.

Venture capital managers: Citicorp; First Analysis; Mesirow Financial; and Pacific Inland.

The master custodian is Continental Illinois; the investment consultant is Becker, Burke Associates.

The key personnel overseeing the investment management of the fund's assets are Thomas J. Stack, executive director; Michael Nehf, comptroller; and Laima Milaitis, deputy executive director.

Public School Teachers' Pension & Retirement Fund of Chicago

	($ millions)
Total assets*	3,502
Defined benefit	3,502

**P&I estimate*

CHICAGO — As of Sept. 30, *Pensions & Investments* estimates the Public School Teachers' Pension & Retirement Fund of Chicago's total employee benefit assets were $3.502 billion, all in a defined benefit plan. The estimate is based on data provided by Money Market Directory.

Chrysler Corp.

	($ millions)
Total assets	5,467
Defined benefit	4,498
Defined contribution	969
Thrift or savings	669
401(k)	300
Employer DB contributions	725
Benefit payments	565
Employer DC contributions	11
Internally managed assets:	
Total DB	558
Hedging devices used:	
Stock index futures	
Defined benefit asset mix:	
Stocks	54%
Fixed income	42%
Cash equivalents	1%
Real estate equity	3%
Defined contribution asset mix:	
Company stock	18%
Other stock	19%
Fixed income	2%
Cash equivalents	17%
GICs/BICs	44%

HIGHLAND PARK, Mich. — As of Sept. 30, Chrysler Corp.'s total employee benefit assets increased 23.9% to $5.467 billion from $4.414 billion a year earlier. Defined benefit assets increased 21.1% during the same period, to $4.498 billion from $3.713 billion. Defined contribution assets increased 38.2% to $969 million from $701 million as of Dec. 31, 1987.

Equity managers: — Ariel; Associated Capital; Atalanta/Sosnoff; Avatar; Bankers Trust; Bear Stearns; Sanford Bernstein; Chase Investors; Columbus Circle; DBL Preferred; Deutsche Bank Capital; Daiwa International; Carl Domino; Fidelity; GE; Glikenhaus; Hahn Holland & Grossman; Hancock Capital Growth; Harris Associates; Hotchkis and Wiley; InterMedia; Investment Research; Leavy; Manufacturers National-Detroit; McKenzie, Walker; Merrill Lynch; Mitchell Hutchins; NCM; Pacific Asset; Palley-Needelman; Perpetuity; Reimer & Koger; Rothschild International; Fayez Sarofim; SLH Capital; Smith Barney; TCW; and Veronis Suhler.

Fixed-income managers: Aetna; Bankers Trust; Drexel; Irving Trust; Metropolitan Realty; J.P. Morgan; Morgan Guaranty; Morgan Stanley; National Bank-Detroit; Travelers; TCW; and State Street Research.

Real estate managers: JMB; Prudential; RREEF; and Shearson Lehman Hutton.

The master trustee and global custodian is Bankers Trust.

Key personnel overseeing the investment management of the fund are F.W. Zuckerman, vice president and treasurer; J.L. Arpin, assistant treasurer; and R.P. Flynn, manager-pension fund investments.

CIGNA Corp.

	($ millions)
Total assets	1,775
Defined benefit	1,194
Defined contribution	581
Profit-sharing	85
Thrift or savings	388
Other	108
Employer DB contributions	30
Benefit payments	54
Internally managed assets:	
Total DB	1,194
Total DC	581
Defined benefit asset mix:	
Stocks	58%
Fixed income	31%
Cash equivalents	4%
Real estate equity	7%

PHILADELPHIA — As of Sept. 30, CIGNA Corp.'s total employee benefit assets increased 22.1% to $1.775 billion from $1.454 billion a year earlier. Defined benefit assets increased 16.5% during the same period, to $1.194 billion from $1.025 billion. Total defined contribution plan assets increased 35.4% to $581 million from $429 million.

Key personnel overseeing the investment management of the fund are James G. Stewart, executive vice president and chief financial officer, and George R. Trumbull, executive vice president and chief investment officer.

Citicorp

	($ millions)
Total assets	2,056
Defined benefit	1,356
Defined contribution	700
401(k)	700

NEW YORK — As of Sept. 30, Citicorp's total employee benefit assets were $2.056 billion. Defined benefit assets were $1.356 billion and defined contribution assets were $700 million.

Public Employees Retirement Association of Colorado

	($ millions)
Total assets	9,227
Defined benefit	9,227
Employer DB contributions	298
Benefit payments	317
Internally managed assets	8,075
Hedging devices used:	
Stock index futures	
Defined benefit asset mix:	
Stocks	46%
Fixed income	35%
Cash equivalents	5%
Real estate equity	8.6%
Mortgages	3.6%
GICs/BICs	1.6%
Other	0.2%

DENVER — As of Sept. 30, assets of the Public Employees Retirement Association of Colorado increased 21.6%, to $9.227 billion from $7.591 billion a year earlier. All assets are in defined benefit plans.

The custodian is Northern Trust.

Norman Benedict is chief investment officer.

Foreign exchange: Oct. 15.

Commonwealth Edison Co.

	($ millions)
Total assets	2,161
Defined benefit	2,161
Internally managed assets	2,030
Hedging devices used:	
Stock index futures	
Defined benefit asset mix:	
Stocks	54.7%
Bonds	41.4%
Cash equivalents	3.9%

CHICAGO — As of Sept. 30, Commonwealth Edison Co.'s total employee benefit assets increased 16.1% to $2.161 billion from $1.861 billion a year earlier. All assets are defined benefit.

Assets not managed internally are run by various commingled fund and mutual fund managers, which Commonwealth Edison officials declined to identify.

The master custodian is Northern Trust.

Key personnel overseeing the investment management of the fund are Howard R. Carlson, manager of investments; Rickard P. Schwartz, senior portfolio manager; and Michael J. Borrelli, investment research director.

The State of Connecticut Trust Funds

	($ millions)
Total assets	7,996
Defined benefit	7,996
Internally managed assets:	
Total DB	1,275
Defined benefit asset mix:	
Stocks	50.9%
Fixed income	27.1%
Cash equivalents	4.9%
Real estate equity	13.9%

Top 200 funds with indexed assets managed internally

($ millions)

Fund	Total	Defined benefit Indexed equities	Defined benefit Indexed bonds	Defined contribution* Indexed equities
TIAA-CREF	26,000	0	0	26,000
New York State & Local	15,968	15,968	0	0
New York State Teachers	13,748	13,748	0	0
California Public Employees	13,000	13,000	0	0
California State Teachers	12,726	0	12,726	0
General Electric	5,552	5,391	0	161
Florida State Board	3,290	3,290	0	0
Maryland State Systems	2,631	2,337	294	0
Sears, Roebuck	1,947	1,151	0	796
E.I. du Pont de Nemours	1,891	1,891	0	0
NYNEX	1,412	686	726	0
Exxon	1,322	946	376	0
Ameritech	1,210	870	340	0
Colorado Employees	1,200	1,200	0	0
Connecticut Trust Funds	1,060	1,060	0	0
Commonwealth Edison	1,031	1,031	0	0
Westinghouse Electric	966	413	553	0
Prudential Insurance	904	718	186	0
U S WEST	900	900	0	0
Utah State Retirement	748	748	0	0
Washington State Board	635	0	635	0
Alabama Systems	572	572	0	0
Chrysler	558	558	0	0
UMWA	500	0	500	0
Texas Employees	499	499	0	0
Kentucky Retirement Systems	430	430	0	0
GTE	322	322	0	0
Travelers	322	270	52	0
Virginia Supplemental	292	292	0	0
Caterpillar	225	225	0	0
State of Michigan	158	158	0	0
CIGNA	150	150	0	0
Delta Air Lines	140	140	0	0
Illinois State Board	140	140	0	0
Alaska Retirement Systems	78	78	0	0
Aetna	49	49	0	0
Metropolitan Life	19	0	0	19
Texaco	17	0	17	0
Total	**112,612**	**69,231**	**16,405**	**26,976**

*No defined contribution plan reported having indexed bonds managed internally.

Top 200 funds with defined contribution assets in indexed equities and bonds

($ millions)

Fund	Total	Equities	Bonds
TIAA-CREF	26,000	26,000	0
Sears, Roebuck	796	796	0
Philip Morris	540	540	0
Ford Motor	500	500	0
AT&T	399	399	0
NYNEX	385	233	152
United Methodist Church	320	296	24
GTE	299	264	35
Shell Oil	277	277	0
Martin Marietta	240	240	0
Trans World Airlines	232	232	0
Bechtel Power	163	163	0
General Electric	161	161	0
U S WEST	161	161	0
Unisys	157	157	0
Minnesota State Board	151	151	0
Honeywell	146	146	0
Motorola	133	133	0
Minnesota Mining & Mfg.	125	125	0
Exxon	118	118	0
Ameritech	110	110	0
Evangelical Lutheran	110	110	0
Cooper Industries	100	100	0
United Airlines	100	100	0
Westinghouse Electric	100	100	0
Southwestern Bell	97	97	0
United Parcel Service	95	95	0
ITT	92	92	0
Bank of America	88	58	30
American Stores	71	71	0
American Electric Power	65	65	0
GenCorp	64	64	0
Federal Retirement Thrift	62	48	14
General Dynamics	60	60	0
Deere	45	45	0
Pan Am	40	40	0
Southern California Edison	36	26	10
Metropolitan Life	19	19	0
TRW	19	19	0
Hercules	17	17	0
S. New England Telephone	15	15	0
Anheuser-Busch	10	10	0
USX	10	10	0
Detroit Systems	7	7	0
Procter & Gamble	5	3	2
UMWA	1	1	0
Total	**32,741**	**32,474**	**267**

Mortgages	2.9%
Other	0.3%

HARTFORD, Conn. — As of Sept. 30, the State of Connecticut Trust Funds' total employee benefit assets increased 28.2% to $7.996 billion from $6.236 billion a year earlier. All the assets are defined benefit.

Equity managers: Domestic — Aetna; Ariel; Bankers Trust; Capital Guardian; Concord Capital; Connecticut National; Franklin; One Lewis Street; Oppenheimer; Phoenix; Roanoke; and Wright.

International — Boston International; Capital Guardian; Fidelity; Nomura; and Schroder.

Fixed-income managers: Domestic — Bear Stearns; Loomis Sayles; PIMCO; Standish, Ayer; and STW.

International — Julius Baer; Brinson Partners; Smith Barney; and State Street Bank.

Real estate managers: Aetna; Aldrich, Eastman & Waltch; CIGNA; Copley; Hancock; Heitman; Hart Advisors; JMB; J.P. Morgan; LaSalle; Phoenix; Public Storage; RREEF; Sentinel; and TCW.

The master trustee and global custodian is Boston Safe Deposit; the investment consultant is TPF&C for domestic and Pension Consulting Alliance for international.

Key personnel overseeing the investment management of the fund are Frank McDermott, chief investment officer and assistant treasurer, and John C. Winchester, senior investment officer and investment manager contact.

Consolidated Edison Co. of New York

	($ millions)
Defined benefit	2,962
Employer DB contribution	90
Benefits payments	135

Hedging devices used:
Stock options

NEW YORK — As of Sept. 30, Consolidated Edison Co. of New York's defined benefit assets increased 16.2%, to $2.962 billion from $2.549 billion a year earlier.

Managers: Aetna; Batterymarch; Boston Co.; Chancellor; Equitable; First Manhattan; JMB; WR Lazard; Mellon; Metropolitan Life; J.P. Morgan; Prudential; Putnam; State Street Research; Travelers; Wells Fargo.

The master trustee is Bankers Trust.

The key person overseeing the investment management of the fund is John Bell, assistant treasurer.

Public funds: Oct. 29.

Consolidated Natural Gas

	($ millions)
Total assets	1,648
Defined benefit	970
Defined contribution	678
Thrift or savings	678
Employer DB contributions	0
Benefit payments	30
Employer DC contributions	22
Internally managed assets:	
Total DC	20
Hedging devices used:	
Stock index futures	
Defined benefit asset mix:	
Stocks	60%
Fixed income	3%
Cash equivalents	8%
IPGs	29%
Defined contribution asset mix:	
Company stock	79%
Other stock	2%
Cash equivalents	3%
IPGs	16%

PITTSBURGH — Consolidated Natural Gas Co. is new to the Top 200. Total employee benefit assets were $1.648 billion as of Sept. 30, of which $970 million was defined benefit and $678 million was defined contribution.

Equity managers: Domestic — BEA Associates; Lynch & Mayer; Quest Advisory; W.H. Reaves; RCM Capital; and Rosenberg Institutional.

Fixed-income managers: Domestic — Bankers Trust; Equitable; and Prudential.

The master trustee is Bankers Trust Co.; the investment management consultant is Lewis Bailey Associates.

D.W. Borneman, assistant vice president-asset management, oversees the investment management of the fund.

Cooper Industries Inc.

	($ millions)
Total assets	1,700
Defined benefit	950
Defined contribution	750
Employer DB contributions	11
Benefit payments	60
Employer DC contributions	30
Defined benefit asset mix:	
Stocks	20%
Cash equivalents	80%
Defined contribution asset mix:	
Other stock	20%
Cash equivalents	5%
GICs/BICs	75%

HOUSTON — As of Sept. 30, Cooper Industries Inc.'s total employee benefit assets increased 54.5% to $1.7 billion from $1.1 billion a year earlier. Defined benefit assets increased 31% to $950 million from $725 million. Defined contribution assets doubled to $750 million from $375 million.

Equity manager: Mellon.

Other managers: Fischer, Francis; J.P. Morgan; and T. Rowe Price.

The master trustee is Citibank.

The key person overseeing fund investments is Dwight S. Kadar, director-investment management.

D

Deere & Co.

	($ millions)
Total assets	2,720
Defined benefit	2,500
Defined contribution	220
Other	220
Employer DB contributions	47
Benefit payments	180
Employer DC contributions	10
Internally managed assets:	
Total DB	1,900
Defined benefit asset mix:	
Stocks	77%
Fixed income	19%
Cash equivalents	1%
Real estate equity	2%
Venture capital	1%
Defined contribution asset mix:	
Company stock	7%
Other stock	20%
GICs/BICs	73%

MOLINE, Ill. — As of Sept. 30, Deere & Co.'s total employee benefit assets increased 18.3% to $2.72 billion from $2.3 billion a year earlier. Defined benefit assets increased 16.3% during the same period, to $2.5 billion from $2.15 billion. Assets in its savings/401(k) plan increased 46.7%, to $220 million from $150 million.

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Equity managers: Domestic — Batterymarch; DFA; Morgan Guaranty; and Roll & Ross.

International — Acadian; DFA; and Roll & Ross.

Real estate managers: AEW; Copley; LaSalle; Morgan Guaranty.

The master trustee and global custodian is Boston Safe Deposit & Trust.

D.R. Schwartz is assistant treasurer-investments and oversees the investment management of the fund.

Delta Air Lines Inc.

	($ millions)
Total assets	4,050
Defined benefit	3,400
Defined contribution	650
Thrift or savings	650
Employer DB contributions	140
Employer DC contributions	30
Internally managed assets:	
Total DB	450
Hedging devices used:	
Stock options	
Stock index futures	
Defined benefit asset mix:	
Stocks	60%
Fixed income	25%
Cash equivalents	10%
Real estate equity	2.5%
Venture capital	2.5%
Defined contribution asset mix:	
Company stock	11%
Other stock	14%
Fixed income	13.5%
GICs/BICs	61.5%

ATLANTA — As of Sept. 30, Delta Air Lines Inc.'s total employee benefit assets increased 22.9% to $4.05 billion from $3.296 billion a year earlier. Defined benefit assets increased 23.8% during the same period, to $3.4 billion from $2.746 billion. Defined contribution assets increased 18.2%, to $650 million from $550 million.

Delta declined to disclose its managers.

The master trustee and global custodian is Harris Trust.

Jim Taylor is assistant vice president-investment management.

City of Detroit Retirement Systems

	($ millions)
Total assets*	3,587
Defined benefit	3,090
Defined contribution	497
Other	497
Employer DB contributions	144
Benefit payments	183
Employer DC contributions	0

**book value as of June 30, 1989*

Internally managed assets:	
Total DB	195
Total DC	31
Hedging devices used:	
Stock index futures	
Fixed-income futures	
Defined benefit asset mix:	
Stocks	24%
Fixed income	25%
Cash equivalents	13%
Real estate equity	3%
Mortgages	11%
GICs/BICs	9%
Private placements	1%
Other	14%
Defined contribution asset mix:	
Other stock	24%
Fixed income	25%
Cash equivalents	13%
GICs/BICs	9%
Real estate equity	3%
Mortgages	11%
Private placements	2%
Other	13%

DETROIT — As of June 30, the book value of the City of Detroit Retirement System's total employee benefit assets increased 9% to $3.587 billion from $3.291 billion a year earlier. Defined benefit assets increased 10.3% during the same period, to $3.09 billion from $2.802 billion. Defined contribution assets increased 1.6%, to $497 million from $489 million.

The retirement system is composed of the General Retirement System and the Police & Fire Retirement System.

Managers for the General Retirement System are: AFA; Ariel; Boston Co.; Citicorp Investment Management International; Comerica; Fiduciary Management; Hancock Financial; Hancock Properties; Loomis, Sayles; Manufacturers National; Marquette; MIG; NCM; Oppenheimer; PRIMA; Scudder, Stevens & Clark; and Transamerica Life.

Managers for the Police & Fire Retirement System are: Acorn; AFA; Ariel; Bankers Trust; Barnett; Citicorp Investment Management International; Hancock Financial; Hancock Properties; Income Research & Management; Loomis, Sayles; Marquette; Mortgage Investors; Munder; NCM; Oppenheimer; Putnam; and Travelers.

The master custodian for the general system is Comerica; the police and fire system uses Manufacturers Bank. The real estate investment consultant is Townsend.

Key personnel overseeing the investment management of the fund are Thomas Zdrodowski, executive secretary; Nicholas Degel, assistant administrative supervisor; and Walter Stampor, investment agent.

Digital Equipment Corp.

	($ millions)
Total assets	1,742
Defined benefit	1,477
Defined contribution	265
401(k)	265
Employer DB contributions	0
Benefit payments	7
Employer DC contributions	0
Internally managed assets:	
Total DB	500

ACTON, Mass. — As of Sept. 30, 1989, Digital Equipment Corp.'s total employee benefit assets increased 24.6% to $1.742 billion from $1.398 billion a year earlier. Defined benefit assets increased 21.2% during the same period, to $1.477 billion from $1.219 billion. Defined contribution assets increased 48%, to $265 million from $179 million.

Equity managers: Domestic — Alliance; Bankers Trust; Capital Guardian; First Quadrant; and Wells Fargo.

International — Boston International and Capital Guardian.

Fixed-income managers: Bankers Trust and Jennison.

Real estate manager: Aldrich, Eastman & Waltch.

The master trustee is Boston Safe Deposit.

The key person overseeing the investment management of the fund is A. Raymond Schmalz, group treasury manager.

The Dow Chemical Co.

	($ millions)
Total assets	2,700

MIDLAND, Mich. — As of Sept. 30, The Dow Chemical Co.'s employee benefit assets totaled $2.7 billion.

E.I. du Pont de Nemours & Co.

	($ millions)
Total assets	18,681
Defined benefit	12,945
Defined contribution	5,736
Thrift or savings	5,232
401(k)	157
ESOP	142
Other	205
Employer DB contributions	0
Benefit payments	644
Internally managed assets:	
Total DB	12,806
Hedging devices used:	
Bond options	
Stock index futures	
Fixed-income futures	
Short selling	
Defined benefit asset mix:	
Stocks	54%
Fixed income	35%
Cash equivalents	10%
Real estate equity	1%
Defined contribution asset mix:	
Company stock	9%
Other stock	6%
GICs/BICs	81%
Other	4%

WILMINGTON, Del. — As of Sept. 30, E.I. du Pont de Nemours & Co.'s total employee benefit assets increased 13.3% to $18.681 billion from $16.489 billion a year earlier. Defined benefit assets increased 11.9% during the same period, to $12.945 billion from $11.57 billion. Defined contribution assets increased 16.6% to $5.736 billion from $4.919 billion.

Real estate managers: Trammell Crow; EQK: Hancock; Lincoln Property; J.P. Morgan; and NCNB Texas.

Venture capital managers: APA Excelsior Funds I and II; Capital Management Services; Crossroads Capital; Golder, Thoma & Cressey; Hambrecht & Quist; Horsley Keogh; Pathfinder Funds; T. Rowe Price; Robertson Coleman & Stephens; and Warburg, Pincus.

The master custodian is Wilmington

Top 200 funds with assets in private placements

Defined benefit

Fund	($ millions)
Wisconsin State Board	2,806
General Electric	1,520
AT&T	1,353
Alabama Systems	1,013
State of Michigan	687
California State Teachers	478
Colorado Employees	340
New York State Teachers	305
North Carolina	267
Washington State Board	247
Kansas Public Employees	244
Honeywell	161
Prudential Insurance	161
Ford Motor	100
Missouri Public Schools	99
Pacific Gas & Electric	72
Los Angeles County	69
Union Carbide	54
New Jersey	50
United Airlines	50
San Francisco City/County	43
Textron	40
Travelers	38
Maine State Retirement	37
E.I. du Pont de Nemours	34
Detroit Systems	32
Anheuser-Busch	27
Illinois State Board	25
New York State & Local	25
Sears, Roebuck	21
Louisiana State Employees	20
Maryland State Systems	16
World Bank	14
S. New England Telephone	14
CIGNA	13
Ohio State Teachers	9
Westinghouse Electric	9
Phillips Petroleum	8
Armco	6
Equitable Life	5
Commonwealth Edison	3
Minnesota Mining & Mfg.	1
Indiana Public Employees	1
Kentucky Retirement	1
Xerox	1
Total	**10,519**

Defined contribution

Fund	($ millions)
TIAA-CREF	10,000
Xerox	23
Detroit Systems	12
Total	**10,035**

Top 200 funds with assets in LBOs

Fund	($ millions)
Washington State Board	1,063
TIAA-CREF*	700
New York State & Local	608
Oregon Public Employes	583
Wisconsin State Board	450
Iowa Public Employees	312
AT&T	226
State of Michigan	191
United Technologies	175
GTE	143
Minnesota State Board	118
Illinois State Board	75
Utah State Retirement	63
Colorado Employees	60
World Bank	56
Minnesota Mining & Mfg.	52
Delta Air Lines	50
Textron	50
ITT	34
Aluminum Co. of America	33
NYNEX	30
CIGNA	25
Phillips Petroleum	25
Pennsylvania Employes	21
Grumman	10
Bank of America	6
Eli Lilly	4
Total	**5,133**

*TIAA-CREF's figure reflects defined contribution assets. All others are defined benefit.

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Trust; the global custodian is Chase Manhattan.

Key personnel overseeing the investment management of the fund are K.E. Tucker, vice president-pension investments; E.J. Bassett, director-equity investments; and L.R. Starrett, director-fixed-income investments.

Pensions & Investments will publish a directory of leveraged buy-out funds and partnerships in the March 5 issue.

Top 200 funds with defined contribution assets in international investments

($ millions)

Fund	Total	Equities	Bonds
TIAA-CREF	4,053	4,000	53
Bechtel Power	333	222	111
Xerox	259	259	0
American Stores	157	157	0
Trans World Airlines	149	149	0
Sears, Roebuck	68	68	0
Halliburton	64	64	0
Motorola	61	61	0
Pan Am	56	56	0
BP America	47	47	0
Evangelical Lutheran	35	35	0
Southern Baptist	28	28	0
University of California	8	0	8
Eli Lilly	4	4	0
Detroit Systems	2	2	0
Total	**5,324**	**5,152**	**172**

E

Eastern Air Lines Inc.

	($ millions)
Total assets	2,410
Defined benefit	1,500
Defined contribution	910
Employer DB contributions	78
Benefit payments	128

MIAMI — As of Sept. 30, Eastern Air Lines Inc.'s total employee benefit assets increased 18.1% to $2.41 billion from $2.041 billion a year earlier. Defined benefit assets increased 25% during the same period, to $1.5 billion from $1.2 billion. Defined contribution assets increased 8.2%, to $910 million from $841 million.

Defined benefit managers: Delafield; Delaware; Equitable Real Estate; Forstmann-Leff; INVESCO; Northern Investment; Pacific Financial; Prudential Asset; Solomon; and Templeton.

Defined contribution managers: Brandywine; Campbell Advisors; Capital Guardian; Cramer Rosenthal McGlynn; Hawthorne Associates; Lord, Abbett; National Investment Services; Waite & Correnti; and Wellington.

Boston Safe Deposit is master trustee and global custodian for the defined benefit plan. State Street is master trustee and NCNB is real estate custodian for the defined contribution plan.

Key personnel overseeing the investment management of the defined benefit fund are Joseph L. Fromm, director-pension asset management, and Brian P. White, director-pension plans. Overseeing the investment management of the defined contribution fund is Charles G. Dyer, director.

Eastman Kodak Co.

	($ millions)
Total assets*	9,500
Defined benefit	7,300
Defined contribution	2,200
401(k)	2,200
Employer DB contributions	4
Benefit payments	270
Employer DC contributions	136

**P&I estimate*

Hedging devices used:
Stock index futures
Fixed-income futures

Defined benefit asset mix:	
Stocks	70%
Cash equivalents	1%
Real estate equity	10%
Annuities	14%
Other	5%
Defined contribution asset mix:	
Company stock	12%
Other stock	6%
GICs/BICs	82%

ROCHESTER, N.Y. — As of Sept. 30, Eastman Kodak Co.'s total employee benefit assets were estimated at $9.5 billion, based on the $7.931 billion listed by the company as of Dec. 31, 1988.

Equity managers: Domestic — American National Bank; Analytic; Baker Nye; Sanford C. Bernstein; Brignoli; Fidelity Management Trust; Neuberger & Berman; Oppenheimer; T. Rowe Price; PRIMECAP; Rosenberg Institutional; TCW; Value Line; and Waddell & Reed.

Global — Rogers, Casey and Templeton.

Real estate managers: Aetna; AEW; Boston Co.; Cabot, Cabot & Forbes; Copley; Equitable; Goldman, Sachs; JMB; Lehndorff & Babson; Metropolitan Life; National Property Advisors; The New England; Property Capital; PSI; Rogers, Casey; RREEF; and Schroder.

Tactical asset allocator: Boston Co.

Foreign exchange managers: Bankers Trust and FX Concepts.

Annuities manager: Metropolitan Life.

Capital growth manager: John Hancock.

LBO managers: Forstmann Little and Nightingale Atlantic.

Venture capital manager: Horsley Keogh.

Managed futures: Mount Lucas.

Oil & gas managers: Chase Investors and J.P. Morgan.

Cash manager: Discount Corp. of New York.

Other managers: EAI; Equitable Capital; First Reserve; Lazard Freres; Merrill Lynch; and Provident National.

Prudential is a GIC manager for the company's 401(k) plan.

Boston Safe Deposit is the master trustee and global custodian; the investment consultant is Rogers, Casey.

Key personnel overseeing the investment management of the fund are Russell L. Olson, director-pension investments, and A. Duff Lewis Jr., pension investment coordinator.

The Church Pension Fund (Episcopal)

	($ millions)
Total assets	1,837
Defined benefit	1,837
Employer DB contributions	44
Benefit payments	47

Hedging devices used:
Stock options
Bond options
Stock index futures
Fixed-income futures
Short selling

Defined benefit asset mix:	
Stocks	59%
Fixed income	37%
Cash equivalents	4%

NEW YORK — As of Sept. 30, The Church Pension Fund's (Episcopal) total employee benefit assets increased 25% to $1.837 billion from $1.470 billion a year earlier. All the assets are defined benefit.

Equity managers: Domestic — Alliance and J.P. Morgan.

International — J.P. Morgan.

Fixed-income managers: Domestic — Alliance and J.P. Morgan.

International — J.P. Morgan.

The master trustee and global custodian is J.P. Morgan.

Key personnel overseeing the investment management of the fund are Robert A. Robinson, president, and Eric T. Lexow, senior vice president.

The Equitable Life Assurance Society of the United States

	($ millions)
Total asset	1,639
Defined benefit	940
Defined contribution	699
Thrift or savings	699
Employer DB contributions	3
Benefit payments	27
Employer DC contributions	25

Internally managed assets:	
Total DB	940
Total DC	699
Defined benefit asset mix:	
Stocks	23.2%
Fixed income	67.9%
Cash equivalents	0.6%
Real estate equity	8.3%
Defined contribution asset mix:	
Other stock	18.6%
Cash equivalents	0.1%
GICs/BICs	78.1%
Other	3.2%

NEW YORK — As of Sept. 30, The Equitable Life Assurance Society of the United States's total employee benefit assets were $1.639 billion, with $940 million in defined benefit assets and $699 million in a thrift or savings plan.

Key personnel overseeing the investment management of the fund are Peter A. Lipuma, vice president; Glenn H. Gettier Jr., executive vice president and chief financial officer; and Raymond L. Colotti, senior vice president.

Exxon Corp.

	($ millions)
Total assets	8,066
Defined benefit	3,814
Defined contribution	4,252
Thrift or savings	3,579
401(k)	507
ESOP	166
Employer DB contributions	103
Benefit payments	338

Top 200 funds with defined benefit assets in international investments

($ millions)

Fund	Total	Equities	Bonds	Other
United Nations Joint Staff	4,254	2,137	1,732	385
California Employees	2,700	2,700	0	0
AT&T	2,085	2,085	0	0
General Electric	1,913	1,653	260	0
GTE	1,845	1,459	386	0
Colorado Employees	1,152	1,152	0	0
U S WEST	1,150	1,150	0	0
Oregon Public Employes	1,115	1,115	0	0
Ameritech	1,030	930	100	0
United Technologies	960	860	100	0
Los Angeles County	923	903	16	4
E.I. du Pont de Nemours	911	380	470	61
NYNEX	853	853	0	0
Prudential Insurance	804	499	305	0
Arizona State Retirement	760	760	0	0
World Bank	713	436	277	0
Wisconsin State Board	705	380	325	0
Connecticut Trust Funds	680	680	0	0
Tennessee Consolidated	650	500	150	0
Illinois Teachers	626	493	133	0
Hawaii State Employees	609	483	126	0
Eastman Kodak	600	600	0	0
San Francisco City/County	566	256	310	0
Illinois Municipal	500	384	116	0
Philip Morris	500	500	0	0
Caterpillar	493	493	0	0
Exxon	417	417	0	0
Owens-Illinois	400	346	54	0
Kansas Public Employees	325	262	63	0
Southwestern Bell	318	318	0	0
TRW	314	210	104	0
Alaska Retirement Systems	310	310	0	0
Delta Air Lines	300	300	0	0
ITT	295	198	97	0
Pennsylvania Employes	290	60	230	0
Pacific Gas & Electric	272	272	0	0
Illinois State Universities	270	270	0	0
Monsanto	260	250	10	0
S. New England Telephone	251	251	0	0
Amoco	244	244	0	0
Pennsylvania Public School	244	0	183	61
Allied-Signal	227	227	0	0
Southern California Edison	223	223	0	0
American Airlines	200	140	60	0
Honeywell	193	105	88	0
Travelers	187	163	24	0
Hercules	181	181	0	0
Sears, Roebuck	180	180	0	0
University of California	178	0	178	0
North Carolina	176	176	0	0
USX	175	175	0	0
Unisys	172	172	0	0
Minnesota Mining & Mfg.	157	135	22	0
Los Angeles Fire & Police	155	155	0	0
Inland Steel	150	150	0	0
Philadelphia City	149	149	0	0
Utah State Retirement	145	145	0	0
FPL Group	143	143	0	0
Illinois State Board	135	125	10	0
Nat'l Rural Electric Co-op	126	126	0	0
Aetna	125	125	0	0
J.C. Penney	123	123	0	0
BP America	119	119	0	0
Nevada Public Employees	119	119	0	0
Bank of America	118	99	19	0
Shell Oil	115	115	0	0
Eli Lilly	113	113	0	0
Westinghouse Electric	107	107	0	0
Presbyterian Church	105	100	5	0
PPG Industries	102	102	0	0
Aluminum Co. of America	100	60	40	0
Chrysler	95	95	0	0
Deere	90	90	0	0
Chevron	86	0	30	56
Maine State Retirement	85	85	0	0
New York State & Local	83	83	0	0
CIGNA	81	81	0	0
United Airlines	80	80	0	0
Chicago Municipal	79	79	0	0
Armco	77	77	0	0
Rhode Island	69	69	0	0
Idaho Public Employees	62	62	0	0
Commonwealth Edison	59	34	25	0
Bakery & Confectionery	50	50	0	0
Iowa Public Employees	41	41	0	0
Southern Baptist	38	38	0	0
Bethlehem Steel	30	30	0	0
Mobil Oil	30	30	0	0
Motorola	30	30	0	0
New York Life	28	22	0	6
Xerox	16	16	0	0
Detroit Systems	15	15	0	0
General Dynamics	15	15	0	0
New Mexico Educational	12	12	0	0
American Stores	3	3	0	0
Total	**39,359**	**32,738**	**6,048**	**573**

Internally managed assets:	
Total DB	1,425
Total DC	2,422
Hedging devices used:	
Stock index futures	
Fixed-income futures	
Defined benefit asset mix:	
Stocks	63%
Fixed income	13%
Cash equivalents	6%
Real estate equity	9%
Other	9%
Defined contribution asset mix:	
Company stock	40%
Other stock	3%
Cash equivalents	57%

NEW YORK — As of Sept. 30, Exxon Corp.'s total U.S. employee benefit assets increased 6% to $8.066 billion from $7.609 billion a year earlier. Defined benefit assets increased 9% during the same period, to $3.814 billion from $3.498 billion. Defined contribution assets increased 3.4% to $4.252 billion from $4.111 billion.

Equity managers: Domestic — Sanford C. Bernstein; Fidelity; Trinity; and Wells Fargo.

International — State Street Bank and Wells Fargo.

Fixed-income managers: Domestic — Chase Investors; J.P. Morgan; and Wells Fargo.

Real estate managers: Aetna; Corporate Property Investors; Equitable; NCNB Texas; and Prudential.

Insured reserves managers: Equitable; John Hancock; Prudential; and Travelers.

Royalties managers: First City Texas and Premier Bancorp.

Venture capital manager: Horsley Keogh.

The master trustee is Bank of New York; the global custodian is State Street Bank.

Key personnel overseeing the investment management of the fund are W. Allen Harrison, assistant treasurer; James E. Bayne, manager-trusts and benefits finance; and Jonathan P. Mason, staff financial analyst.

F

Federal Retirement Thrift Investment Board

	($ millions)
Total assets	4,319
Defined contribution	4,319
Thrift or savings	4,319
Employer DC contributions	447
Internally managed assets	4,257
Defined contribution asset mix:	
Other stock	1.1%
Fixed income	0.3%
Cash equivalents	98.6%

WASHINGTON — As of Sept. 30, the Federal Retirement Thrift Investment Board's total employee benefit assets increased 90.2% to $4.319 billion from $2.271 billion a year earlier. All of the assets are in a defined contribution plan.

Equity manager: Domestic — Wells Fargo.

Fixed-income manager: Domestic — Wells Fargo.

The master custodians are the U.S. Treasury Department and Wells Fargo Bank.

Key personnel overseeing the investment management of the fund are Peter B. Mackey, director-investments; Alison L. Doone, deputy director-investments; and Monica L. Spaulding, financial analyst.

Florida State Board of Administration

	($ millions)
Total assets	18,700
Defined benefit	18,700
Employer DB contributions	860
Benefit payments	654
Internally managed assets	11,979
Hedging devices used:	
Bond options	
Stock index futures	
Fixed-income futures	
Defined benefit asset mix:	
Stocks	44.7%
Fixed income	41.7%
Cash equivalents	9.6%
Real estate equity	4%

TALLAHASSEE, Fla. — As of Sept. 30, the Florida State Board of Administration's total employee benefit assets increased 29.8% to $18.7 billion from $14.411 billion 15 months earlier. All of the assets are in a defined benefit plan.

Equity managers: Domestic — Alliance; Ariel; Barnett Banks; Barrow, Hanley, Mewhinney & Strauss; Bear, Stearns; Delaware; Denver; Eagle; IDS Growth; Lazard Corporate Partners; Lazard Freres; Prudential Asset; Sun Banks; Westwood; and Wells Fargo.

Fixed-income managers: Domestic — Alliance and APAM.

Real estate managers: Aetna; Brinson Partners; Equitable; Goldman, Sachs; JMB; LaSalle; Lehndorff &

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Babson; and Prudential.

Citibank is the master and global custodian; the investment consultant is SEI.

Key personnel overseeing the investment management of the fund are Cliff Hinkle, executive director; William O. Bell, chief of management policy; Lan Janecek, director of equities; Carmen Hiers, director of fixed income; and Doug Bennett, director of real estate.

Ford Motor Co.

	($ millions)
Total assets	22,800
Defined benefit	18,100
Defined contribution	4,700
Other	4,700
Employer DB contributions	400
Benefit payments	900
Employer DC contributions	110
Internally managed assets:	
Total DB	1,000
Hedging devices used:	
Stock options	
Bond options	
Stock index futures	
Fixed-income futures	
Defined benefit asset mix:	
Stocks	58%
Fixed income	28%
Cash equivalents	10%
Real estate equity	4%
Defined contribution asset mix:	
Company stock	55%
Other stock	11%
Cash equivalents	11%
GICs/BICs	21%
Other	2%

DEARBORN, Mich. — As of Sept. 30, Ford Motor Co.'s total employee benefit assets increased 16% to $22.8 billion from $19.65 billion a year earlier. Defined benefit assets increased 19.9% during the same period, to $18.1 billion from $15.1 billion. Defined contribution assets increased 3.3%, to $4.7 billion from $4.55 billion.

Equity managers: Global — Alliance Capital; Ariel; Sanford Bernstein; Brinson Partners; Capital Guardian; Chase; Concord Capital; Dewey Square; Dreman Value; Fidelity Management; Manufacturers National-Detroit; Mitchell Hutchins; J.P. Morgan; PRIMECAP; Sarofim Trust; Scudder Stevens; and State Street Research.

Fixed-income managers: Global - Capital Guardian; Dewey Square; J.P. Morgan; T. Rowe Price; Sarofim; State Street Research; and Wells Fargo.

Real estate managers: Aetna; CIGNA; Equitable; GE; JMB; LaSalle; Lehndorff & Babson; J.P. Morgan; NCNB; J.W. O'Connor; Public Storage; Sentinel; and TCW.

The master trustee and global custodian is Manufacturers National Bank of Detroit.

Key personnel overseeing the investment management of the fund are M.E. Maertens, manager-trust investments, and P.E. Sharp, assistant treasurer.

FPL Group Inc.

	($ millions)
Total assets	1,963
Defined benefit	1,369
Defined contribution	594
401(k)	463
ESOP	131
Employer DB contributions	0
Employer DC contributions	0
Hedging devices used:	
Bond options	
Fixed-income futures	
Defined benefit asset mix:	
Stocks	53.2%
Fixed income	22.6%
Cash equivalents	17.6%
Real estate equity	6.6%
Defined contribution asset mix:	
Company stock	54%
Other stock	9%
GICs/BICs	37%

NORTH PALM BEACH, Fla. — As of Sept. 30, FPL Group Inc.'s total employee benefit assets increased 8.9% to $1.963 billion from $1.803 billion a year earlier. Defined benefit assets increased 11.2% during the same period, to $1.369 billion from $1.231 billion. Defined contribution assets increased 3.8%, to $594 million from $572 million.

Equity managers: Domestic — General American; J.P. Morgan; Roanoke; Fayez Sarofim; and Donald Smith.

International — J.P. Morgan and RCB Global Trust.

Fixed-income managers: Domestic — Wells Fargo and Western Asset.

Real estate managers: JMB; McMahan; and RREEF.

Tactical asset allocation manager: Wells Fargo.

The master trustee is First Wachovia; the investment consultant is Rogers, Casey & Associates.

Key personnel overseeing the investment management of the fund are Robert Sears, treasurer, and Robert McGrath, manager.

G

GenCorp Inc.

	($ millions)
Total assets	1,719
Defined benefit	1,408
Defined contribution	311
Thrift or savings	311
Defined benefit asset mix:	
Stocks	41.1%
Fixed income	50%
Cash equivalents	5.6%
Real estate equity	3.3%
Defined contribution asset mix:	
Company stock	6.9%
Other stock	9.7%
GICs/BICs	83.4%

FAIRLAWN, Ohio — As of Sept. 30, GenCorp Inc.'s total employee benefit assets increased 2.1% to $1.719 billion from $1.683 billion a year earlier. Defined benefit assets increased 1.4% during the same period, to $1.408 billion from $1.388 billion. Defined contribution assets increased 5.4% to $311 million from $295 million.

Equity managers: Domestic — J.P. Morgan; Neuberger & Berman; and Wilkens & Nanovic.

Fixed-income managers: Domestic — ASB and Lincoln Capital.

Real estate manager: First Management Group.

The master trustee is Northern Trust.

Key personnel overseeing the investment management of the fund are David K. McNiff, director-investment management, and Sina H. Baldwin, manager-investment analysis.

General Dynamics Corp.

	($ millions)
Total assets	6,000
Defined benefit	3,900
Defined contribution	2,100
Other	2,100
Employer DB contributions	120
Benefit payments	120
Internally managed assets:	
Total DB	2,700
Total DC	1,500
Defined benefit asset mix:	
Stocks	35%
Fixed income	62%
GICs/BICs	3%
Defined contribution asset mix:	
Company stock	9%
Other stock	13%
Fixed income	17%
GICs/BICs	61%

ST. LOUIS — As of Sept. 30, General Dynamics Corp.'s total employee benefit assets increased 20% to $6 billion from $5 billion a year earlier. Defined benefit assets increased 18.2% during the same period, to $3.9 billion from $3.3 billion. Total defined contribution assets, which include a 401 (k) plan and thrift or savings plan, increased 23.5% to $2.1 billion from $1.7 billion.

Equity managers: Domestic — Alliance; Ardsley; Daniel Breen; Campbell; Delaware Investment; GE Investment; Jennison; Lazard Freres; Miller, Anderson & Sherrerd; J.P. Morgan; Rosenberg Institutional; SASCO; Trinity; and Wells Fargo.

Fixed-income managers: Domestic — Bank IV; Boatmen's; Discount Advisers; and Lincoln Capital.

GIC managers: Aetna; Equitable; Hancock; and Travelers.

The master trustee and global custodian is Chase Manhattan Bank.

Key personnel overseeing the investment management of the fund are Charles D. Walbrandt, staff vice president; and Rebecca J. Roesch, manager-trust investment operation.

General Electric Co.

	($ millions)
Total assets	28,912
Defined benefit	24,318
Defined contribution*	4,594
Employer DB contributions	0
Benefit payments	1,000
Employer DC contributions	226

**as of June 30, 1989*

Internally managed assets:	
Total DB	22,818
Total DC	3,054
Defined benefit asset mix:	
Stocks	53%
Fixed income	24%
Cash equivalents	4%
Real estate equity	8%
Mortgages	2%
GICs/BICs	2%
Private placements	7%
Defined contribution asset mix:	
Company stock	35%
Other stock	8%
Fixed income	24%
Cash equivalents	2%
GICs/BICs	31%

STAMFORD, Conn. — As of Sept. 30, General Electric Co.'s total employee benefit assets increased 14.3% to $28.912 billion from $25.3 billion a year earlier. Defined benefit assets increased 15.3% during the same period, to $24.318 billion from $21.1 billion. Defined contribution assets increased 12% to $4.594 billion on June 30, 1989, from $4.1 billion on Sept. 30, 1988.

The custodian and global custodian is State Street Bank and Trust.

Key personnel overseeing the investment management of the fund are Dale Frey, chairman of the board and president of GE Investment Co.; Art Bahr, executive vice president; and John Meyers, executive vice president.

General Motors Corp.

	($ millions)
Total assets	40,900
Defined benefit	35,500
Defined contribution	5,400

NEW YORK — As of Sept. 30, General Motors Corp.'s total employee benefit assets increased 8.8% to $40.9 billion from $37.6 billion a year earlier. Defined benefit assets increased 9.2% during the same period, to $35.5 billion from $32.5 billion. Defined contribution assets rose 5.9% to $5.4 billion from $5.1 billion.

Managers: Aetna; AEW; ANB; AmeriTrust; Associated Capital; Bankers Trust; Baring America; Baring Institutional Realty; Baring International; Barrow, Hanley Mewhinney & Strauss; Batterymarch; BEA; Beekman Capital; Sanford Bernstein; Boston Co.; Canada Life; Capital Guardian; Chancellor; Chase Manhattan; Citibank; County NatWest; Cypress Capital; Delaware Investment Advisors; Dewey Square; DFA; Fidelity International; Fidelity Management; FNB Boston; FNB Chicago; Franklin Portfolio; Frontier Capital; G.T. Capital; Harris Trust; Hill Samuel; W.R. Huff; INVESCO; Jennison; Kleinwort Benson; Lazard Freres; Lehman Management; Lincoln Capital; MacKay-Shields; Magten; Marathon; Matrix Capital; Mellon Bank; Merrill Lynch; Metropolitan Life; Morgan Grenfell; Morgan Guaranty; Morgan Stanley Asset; National Bank of Detroit; Nomura Capital; Oechsle; Provident Investment Counsel; Prudential; R.P.I. Institutional; Rosenberg Institutional; Rowe Price-Fleming; N.M. Rothschild International; Schroder Capital; TAL Investment; TCW Asset; United Capital; Value Line; Weiss Peck & Greer; Wells Fargo; and WorldInvest.

The master trustees are Bankers Trust, Mellon Bank and Chase; the global custodian is Chase.

Key personnel overseeing the investment management of the fund are W. Gordon Binns Jr., vice president and chief investment funds officer, and R. Charles Tschampion, director-portfolio.

Special report on mutual funds: June 11.

Top 200 funds with assets in GICs/BICs

($ millions)

	Total	Defined benefit	Defined contribution
Shell Oil	2,969	64	2,905
AT&T	2,464	0	2,464
General Electric	2,252	475	1,777
Eastman Kodak	1,800	0	1,800
Westinghouse Electric	1,600	0	1,600
General Dynamics	1,400	100	1,300
Unisys	1,394	170	1,224
Southern Baptist	1,184	83	1,101
Philip Morris	1,020	0	1,020
Ford Motor	1,000	0	1,000
Procter & Gamble	1,000	0	1,000
Halliburton	863	0	863
GTE	804	0	804
J.C. Penney	775	0	775
Mobil Oil	694	0	694
Xerox	692	0	692
Ameritech	680	0	680
Martin Marietta	657	0	657
NYNEX	643	0	643
BP America	613	0	613
Chevron	609	307	302
Grumman	600	0	600
Honeywell	585	0	585
Phillips Petroleum	550	0	550
Equitable Life	546	0	546
Monsanto	536	0	536
Union Carbide	508	0	508
Raytheon	456	0	456
ITT	454	0	454
K mart	447	103	344
Travelers	424	424	0
Minnesota Mining & Mfg.	423	0	423
PPG Industries	401	16	385
Delta Air Lines	400	0	400
United Airlines	400	0	400
Inland Steel	391	61	330
Southwestern Bell	390	0	390
Consolidated Natural Gas	389	281	108
Eli Lilly	378	63	315
Trans World Airlines	373	91	282
Aluminum Co. of America	355	0	355
Cooper Industries	350	0	350
United Methodist Church	338	138	200
Chrysler	337	10	327
TRW	332	0	332
United Parcel Service	327	83	244
U S WEST	314	0	314
American Electric Power	310	0	310
Hercules	280	35	245
Detroit Systems	278	278	0
Nat'l Rural Electric Co-op	278	0	278
S. California UFCW	269	269	0
GenCorp	200	0	200
Allied-Signal	184	184	0
Tennessee Valley Authority	182	43	139
S. New England Telephone	175	0	175
FPL Group	170	0	170
Deere	160	0	160
Colorado Employees	153	153	0
Armco	141	18	123
Presbyterian Church	130	130	0
Southern California Edison	130	80	50
USX	115	0	115
Pan Am	85	0	85
Bank of America	79	0	79
Minnesota State Board	50	0	50
Textron	50	50	0
Operating Engineers	49	49	0
Hawaii State Employees	45	45	0
Bakery & Confectionery	41	41	0
New York Life	34	0	34
Anheuser-Busch	31	10	21
Pacific Gas & Electric	26	0	26
Bethlehem Steel	25	25	0
Navistar	22	5	17
Bechtel Power	21	0	21
Owens-Illinois	21	21	0
Connecticut Trust Funds	19	19	0
Evangelical Lutheran	4	0	4
Illinois State Universities	3	3	0
UMWA	2	0	2
Total	**39,879**	**3,927**	**35,952**

SPECIAL REPORT

Employees' Retirement System of Georgia

	($ millions)
Total assets*	3,458
Defined benefit	3,458
Employer DB contributions	244

**From Money Market Directory*

ATLANTA — According to Money Market Directory, the Employees' Retirement System of Georgia's total employee benefit assets were $3.458 billion as of June 30.

All of the assets are in a defined benefit plan.

Key personnel overseeing the investment management of the fund are: Rudolph Johnson, director, and Gwin Brewton, division director of retirement counselors and benefits.

Georgia Teachers Retirement System

	($ millions)
Total assets*	8,908
Defined benefit	8,908
Employer DB contributions	661

**From Money Market Directory*

ATLANTA — As of June 30, the Georgia Teachers Retirement System's total employee benefit assets were $8.908. All assets are defined benefit.

Key personnel overseeing the investment management of the fund are C.W. Cary, director, and Nancie H. Boedy, assistant director.

Grumman Corp.

	($ millions)
Total assets	3,170
Defined benefit	2,150
Defined contribution	1,020
Thrift or savings	1,020
Benefit payments	80
Employer DC contributions	17
Internally managed assets:	
Total DB	2,010
Defined benefit asset mix:	
Stocks	40%
Fixed income	33%
Cash equivalents	21%
Real estate equity	5%
Other	1%
Defined contribution asset mix:	
Company stock	25%
Other stock	10%
Fixed income	6%
GICs/BICs	59%

BETHPAGE, N.Y. — As of Sept. 30, Grumman Corp.'s total employee benefit assets increased 12.8% to $3.17 billion from $2.81 billion a year earlier. Defined benefit assets increased 13.1% during the same period, to $2.15 billion from $1.9 billion. Assets in its defined contribution plan, a thrift plan, increased 12.1% to $1.02 billion from $910 million.

Equity managers: Domestic — First Manhattan.

Fixed-income managers: Domestic — First Manhattan.

Real estate managers: CIGNA; Equitable; Prudential; and Sentinel.

The master trustee is Bank of New York.

The key person overseeing the investment management of the fund is William R. Parmentier, assistant treasurer and investment manager.

GTE Corp.

	($ millions)
Total assets	12,423
Defined benefit	10,669
Defined contribution	1,754
401(k)	1,174
ESOP	580
Employer DB contributions	0
Benefit payments	464
Employer DC contributions	69
Internally managed assets:	
Total DB	2,528
Hedging devices used:	
Stock options	
Bond options	
Stock index futures	
Defined benefit asset mix:	
Stocks	69%
Fixed income	22%
Cash equivalents	3%
Real estate equity	1%
Other	5%
Defined contribution asset mix:	
Company stock	48.3%
Other stock	12.4%
Fixed income	1.6%
GICs/BICs	37.7%

STAMFORD, Conn. — As of Sept. 30, GTE Corp's. total employee benefit assets increased 17.2% to $12.423 billion from $10.596 billion a year earlier. Defined benefit assets increased 18.3% during the same period, to $10.669 billion from $9.016 billion. Defined contribution assets increased 11% to $1.754 billion from $1.58 billion.

Equity managers: Domestic — Baker, Nye; Bankers Trust; Sanford C. Bernstein; BMI; Cashman, Farrell; Concord; Darien Capital; Eagle Management; First Manhattan; First Pacific; Franklin; Frontier; General American; Geocapital; Hotchkis and Wiley; Oppenheimer; Pacific Financial; Provident; Richter; Rosenberg Institutional; Donald Smith; Weiss, Peck and Greer.

International — Bankers Trust; Baring; Grantham, Mayo; Mercator; Morgan Guaranty; Nikko; Philippe; Rowe Price-Fleming; TCW/Cursitor-Eaton.

Fixed-income managers: Domestic — Baring America; Pacific Investment; Rampart; Security Capital; Solomon.

International — Beutel, Goodman and WorldInvest.

Real estate managers: Citibank; Manufacturers National Bank; State Street Bank; TCW.

Non-traditional managers: Chancellor (venture capital); Chase Investors; Energy Investors; Forest Investment; Hancock Group/Forest; Manufacturers National Bank; TCW.

The master trustee and global custodian is Bankers Trust Co.

The key personnel overseeing the investment management of the pension funds' assets are John B. Carroll, president of GTE Investment Management Corp., a subsidiary of GTE Corp.; and Pamela W. McCann, vice president-pension fund management and fixed income.

H

Halliburton Co.

	($ millions)
Total assets	2,270
Defined contribution	2,270
Profit-sharing	1,223
Other	1,047
Employer DC contributions	30
Internally managed assets	896
Hedging devices used:	

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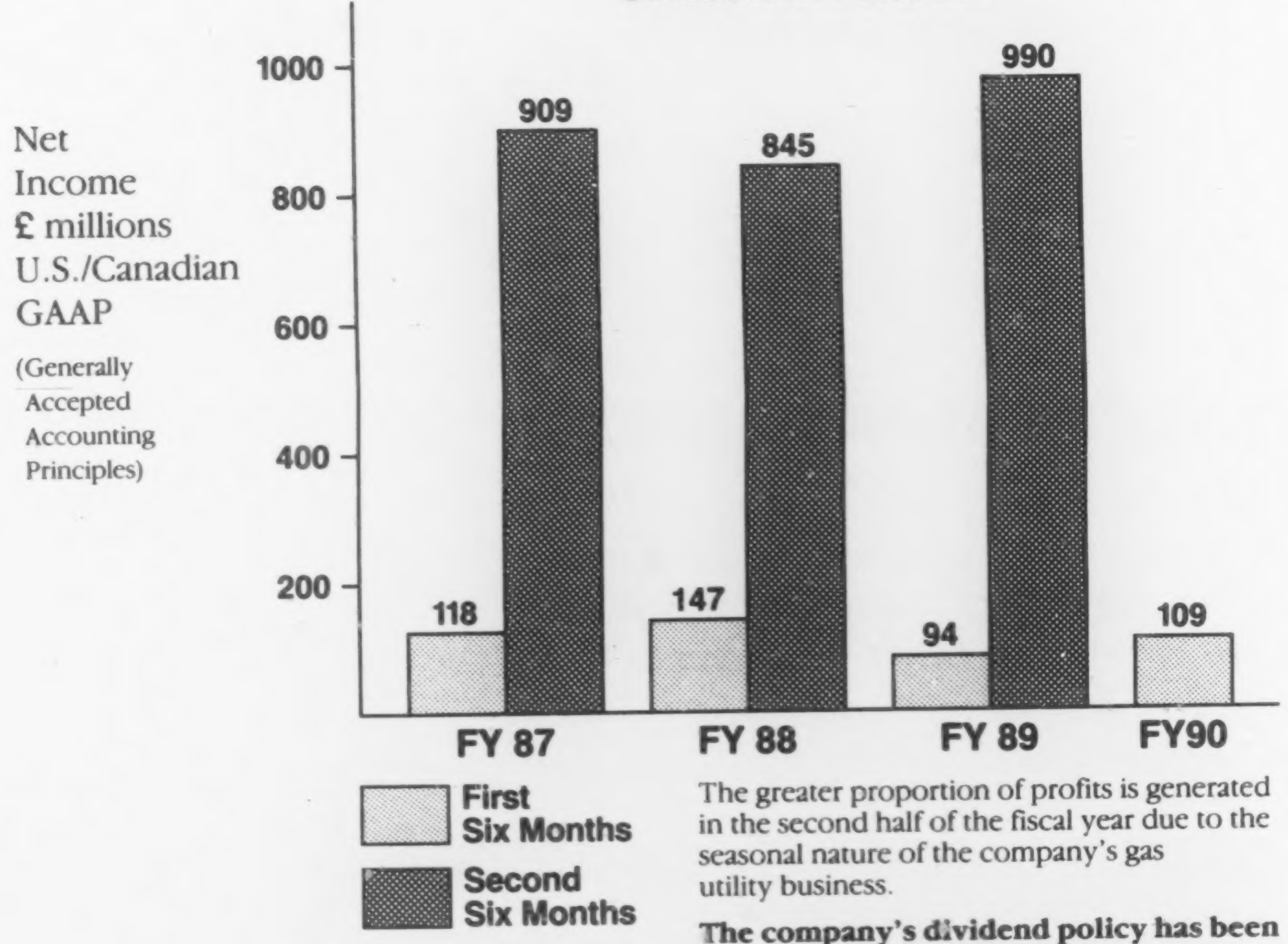

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Sales	2,754	2,638	7,526	7,364
Net Profit* (millions)	109**	94	1,084**	992
Earnings per ADS (pence)*	26	22	256	239
Dividend per Ordinary Share (pence)	3.2	2.75	9.0	8.0

*U.S. and Canadian GAAP-adjusted
**The group has adopted the provisions of FAS 87—Employers' Accounting for Pensions—in its results for Fiscal '89 and the first six months of Fiscal '90. Results for other periods have not been restated.
10 Ordinary shares are equivalent to one American Depositary Share (ADS).
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Fixed-income futures	
Defined contribution asset mix:	
Company stock	5%
Other stock	48%
Fixed income	8%
Cash equivalents	1%
GICs/BICs	38%

DALLAS — As of Sept. 30, Halliburton Co.'s total employee benefit assets increased 15.5% to $2.27 billion from $1.965 billion a year earlier. All assets are defined contribution.

Equity managers: Domestic — INVESCO; Lehman Management; Fayez Sarofim; and Wentworth, Hauser & Violich.

International — Marsh & Cunningham-Castegren; SBC; and Schroder.

Fixed-income managers: Domestic — Neuberger & Berman; PIMCO; and Putnam Advisory.

The master trustee and global custodian is State Street Bank; the investment consultant is SEI.

Nathaniel Duffield is director-trust investments.

Employees' Retirement System of the State of Hawaii

	($ millions)
Total assets	4,051
Defined benefit	4,051
Employer DB contributions	30
Benefit payments	203
Internally managed assets	922
Hedging devices used:	
Stock options	
Fixed-income futures	
Defined benefit asset mix:	
Stocks	40%
Fixed income	32%
Cash equivalents	9%
Real estate equity	8%
Mortgages	10%
GICs/BICs	1%

HONOLULU — As of Sept. 30, the Employees' Retirement System of the State of Hawaii's total employee benefit assets increased 15.9% to $4.051 billion from $3.495 billion a year earlier. All assets are defined benefit.

Equity managers: Domestic — Alliance; Barrow, Hanley, Mewhinney & Strauss, Cadinha; Delaware Investment; Denney & Denney; Hanson; INVESCO; McCowan; and Denis Wong.

International — Daiwa; Nomura; and Schroder.

Fixed-income managers: Domestic — Lehman Management; PIMCO; Scudder, Stevens & Clark; Security Pacific Investment; and Wentworth, Hauser & Violich.

International — ABD; Capital Management International; INVESCO/MIM; Prudential; and Putnam International.

Real estate managers: Aetna; Connecticut General; Hancock; and Metropolitan Life.

The master and global custodian is Bank of New York; the investment consultants are SEI and Callan.

Key personnel overseeing the investment management of the fund are Stanley Siu, executive secretary, and David Shimapukuro, assistant secretary.

Hercules Inc.

	($ millions)
Total assets	1,752
Defined benefit	1,412
Defined contribution	340
401(k)	340
Employer DB contributions	6
Benefit payments	67
Employer DC contributions	30
Defined benefit asset mix:	
Stock	58%
Fixed income	30%
Cash equivalents	1%
Real estate equity	9%
GICs/BICs	2%
Defined contribution asset mix:	
Company stock	19%
Other stock	5%
Cash equivalents	4%
GICs/BICs	72%

WILMINGTON, Del. — As of Sept. 30, Hercules Inc.'s total employee benefit assets increased 10.3% to $1.752 billion from $1.589 billion a year earlier. Defined benefit assets increased 10.4% during the same period, to $1.412 billion from $1.279 billion. Defined contribution assets increased 9.7%, to $340 million from $310 million.

Equity managers: Domestic — Capital Guardian; Cooke & Bieler; Geewax, Terker; Lazard Freres; and Mellon Capital.

International — Fidelity; Marvin & Palmer; J.P. Morgan; and Warburg.

Fixed-income managers: Domestic — Robert C. Brown; Mellon Capital; J.P. Morgan; and The New England.

Real estate managers: Aetna, Equitable; and Prudential.

Other managers: Aetna and Travelers.

The master trustee is Bankers Trust; the global custodian is Chase Manhattan; the investment consultant is Frank Russell.

Key personnel overseeing the investment management of the fund are John R. Long, director-investments; David K. Hall, senior financial analyst;

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Hewlett-Packard Co.

	($ millions)
Total assets*	1,699
Defined benefit	274
Defined contribution	1,425

**P&I estimate*

PALO ALTO, Calif. — *Pensions & Investments* estimates that as of Sept. 30, Hewlett-Packard Co.'s total employee benefit assets were $1.699 billion, of which $274 million was defined benefit and $1.425 billion was defined contribution. The estimates are based on Money Market Directory data.

Robert E. Greeley, manager-corporate investments, oversees the investment management of the funds.

Honeywell Inc.

	($ millions)
Total assets	2,909
Defined benefit	2,096
Defined contribution	813
401(k)	813
Employer DB contributions	17
Benefit payments	119
Defined benefit asset mix:	
Stocks	41.8%
Fixed income	25.9%
Cash equivalents	10.4%
Real estate equity	8.2%
Private placements	7.7%
Venture capital	3.9%
Oil & gas	2.1%
Defined contribution asset mix:	
Other stock	18%
GICs/BICs	72%
Other	10%

MINNEAPOLIS — As of Sept. 30, Honeywell Inc.'s total employee benefit assets increased 14.6% to $2.909 billion from $2.539 billion a year earlier. Defined benefit assets increased 12.7% during the same period, to $2.096 billion from $1.86 billion. Defined contribution assets increased 19.7%, to $813 million from $679 million.

Equity managers: Domestic — Alliance; Forstmann-Leff; GAMCO; Jundt/Capen; and Mellon Capital.

International — Baring International and IDS International.

Fixed-income managers: Domestic — Fischer, Francis, Trees & Watts.

International — Brinson Partners.

Real estate managers: Aetna; Baring Institutional Realty; Coldwell; McMahan; State Street Bank; and TCW.

Venture capital managers: Associated Venture Investors; Centennial Fund; Concord Partners; DLJ Growth Associates; Dougery, Jones & Wilder; Brinson Partners; Forstmann Little; Investech; Medical Inovications; Morgan, Holland; Narragansett First Fund; New Court Partners; Norton Associates; Recovery Management Investors; Robertson Coleman, Stephens & Woodman; T.A. Associates; T. Rowe Associates; Ventech Partners; and Welsh, Carson, Anderson & Stowe.

Private placement managers: Bridge Capital and John Hancock.

Oil and gas managers: Chase Investors; First Reserve; and TCW.

GIC manager: Travelers.

The master trustee for the defined benefit plan is Boston Safe Deposit; the global custodian for equities is Chase Manhattan; the investment consultant is Rogers, Casey.

Key personnel overseeing the investment management of the fund are D.W. Veverka, director-pension investments, and J.T. Wangard, manager-pension investments.

Top 200 funds with assets in mortgages

Defined benefit

Fund	($ millions)
New York State & Local	2,589
California Employees	2,500
Alabama Systems	1,728
New York State Teachers	1,711
Ohio State Teachers	1,146
State of Michigan	1,094
Pennsylvania Employes	636
California State Teachers	592
Oregon Public Employes	510
General Electric	422
San Francisco City/County	379
Hawaii State Employees	363
Detroit Systems	339
Colorado Employees	336
Arizona State Retirement	250
Washington State Board	221
Operating Engineers	197
Alaska Retirement Systems	193
Pennsylvania Schools	178
Bakery & Confectionery	177
Westinghouse Electric	151
Los Angeles County	113
Idaho Public Employees	110
Wisconsin State Board	103
Kentucky Teachers	102
Nevada Public Employees	74
Union Carbide	71
Virginia Supplemental	68
Illinois State Board	55
Ohio School Employees	44
USX	40
Iowa Public Employees	35
Utah State Retirement	30
Aetna	21
Southern Baptist	21
Maryland State Systems	20
Ohio Police & Firemen	12
Phillips Petroleum	10
Philadelphia City	7
Missouri Public Schools	5
New Mexico Employees	4
S. California UFCW	3
United Methodist Church	1
Total	**16,661**

Defined contribution

Fund	($ millions)
TIAA-CREF	18,000
Detroit Systems	55
Nat'l Electrical Contractors	13
San Francisco City/County	1
United Methodist Church	1
Total	**18,070**

National Benefit Fund for Hospital & Health Care Employees

	($ millions)
Total assets	2,241
Defined benefit	2,241
Employer DB contributions	98
Benefit payments	40
Defined benefit asset mix:	
Stocks	55%
Fixed income	35%
Real estate equity	6%
Other	4%

NEW YORK — As of Sept. 30, the National Benefit Fund for Hospital & Health Care Employees' total employee benefit assets increased 18.7% to $2.241 billion from $1.888 billion a year earlier. All assets are defined benefit.

Equity managers: Domestic — FLA Asset Management; Lehman; and Loomis Sayles.

Fixed-income managers: Domestic — Amalgamated Bank; Criterion; Pacific Investment; and State Street Bank.

Real estate managers: Equitable and Prudential.

The master trustee is Northern Trust. The investment consultant is Marco Group.

Key personnel overseeing the investment management of the fund are I.S. Forman, first vice chairman, and August D. Cademartori and Allen C. Abramson, executive committee members.

Hughes Aircraft Co.

	($ millions)
Total assets	6,572
Defined benefit	4,500
Defined contribution	2,072
Profit-sharing	2,072
Employer DB contributions	0
Benefit payments	150
Employer DC contributions	45
Internally managed assets:	
Total DB	1,000
Total DC	1,100

Hedging devices used:
- Stock options
- Bond options
- Stock index futures

LOS ANGELES — As of Sept. 30, 1989, Hughes Aircraft Co.'s total employee benefit assets increased 28% to $6.572 billion from $5.136 billion a year earlier. Defined benefit assets increased 34.9% during the same period, to $4.5 billion from $3.336 billion. Defined contribution assets increased 15.1%, to $2.072 billion from $1.8 billion.

The master trustee and global custodian is Bankers Trust.

The key person overseeing the investment management of the fund is W. Allen Reed, staff vice president-investment management.

I.A.M. National Pension Fund

	($ millions)
Total assets	1,695
Defined benefit	1,693
Defined contribution	2
Other	2
Employer DB contributions	67
Benefit payments	77
Employer DC contributions	1
Defined benefit asset mix:	
Stocks	51.7%
Fixed income	41.5%
Cash equivalents	4.2%
Real estate equity	2.6%
Defined contribution asset mix:	
Cash equivalents	100%

WASHINGTON — As of Sept. 30, the I.A.M. National Pension Fund's total employee benefit assets increased 17.9% to $1.695 billion from $1.438 billion a year earlier. Defined benefit assets also increased 17.9% during the same period, to $1.693 billion from $1.436 billion. Defined contribution assets were flat at $2 million.

Equity managers: Domestic — Dodge & Cox; Lazard Freres; State Street Bank; and Stein Roe.

Fixed-income managers: Domestic — Dodge & Cox; Lazard Freres; State Street Bank; and Stein Roe.

Real estate manager: National Bank of Washington.

The master trustee is State Street Bank.

The board of trustees oversees the investment management of the fund.

IBM Corp.

	($ millions)
Total assets	25,775
Defined benefit	22,500
Defined contribution	3,275
401(k)	3,275
Employer DB contributions	0
Benefit payments	620
Employer DC contributions	100
Internally managed assets:	
Total DB	12,600

Hedging devices used:
- Stock options
- Bond options
- Stock index futures
- Fixed-income futures

STAMFORD, Conn. — As of Sept. 30, IBM Corp.'s total employee benefit assets increased 18.4% to $25.775 billion from $21.761 billion a year earlier. Defined benefit assets increased 16.4% during the same period, to $22.5 billion from $19.332 billion. Defined contribution assets increased 34.8%, to $3.275 billion from $2.429 billion.

Equity managers: Domestic — Alliance; Butler; Chancellor; Columbus Circle; Delaware; Dillon, Read; DFA; Fidelity Investment; Forstmann Little; F.S. Equity; Independence Investment; John Hancock; Lincoln Capital; NCM; Resource Investors; Sasco; State Street Bank; Warburg, Pincus; and Wellington.

International — Capital Guardian; DFA; Matuschka; Oechsle; Rowe Price-Fleming; and State Street Bank.

Fixed income: Domestic — BEA; Discount Corp. of New York; Fischer, Francis, Trees & Watts; Hoisington; Lincoln Capital; Miller, Anderson & Sherrerd; and PIMCO.

International — Morgan Grenfell and WorldInvest.

Real estate managers: AEW; Cabot, Cabot & Forbes; Dreyfus; Equitable; and Prudential.

The master trustee and global custodian is Chase Manhattan; the investment consultant is Frank Russell.

Key personnel overseeing the investment management of the fund are J. Grills, assistant treasurer; C.F. Wolfe, director-investment strategy; and A.M. Shagory, director-investment research and operations.

Public Employees Retirement System of Idaho

	($ millions)
Total assets	1,643
Defined benefit	1,643
Employer DB contributions	89
Benefit payments	91
Internally managed assets	25
Defined benefit asset mix:	
Stocks	43%
Fixed income	36%
Cash equivalents	2%

Top 200 funds with assets in real estate equity

Defined benefit

Fund	($ millions)
AT&T	3,897
California Employees	3,300
Ohio State Teachers	2,034
General Electric	1,977
Washington State Board	1,229
California State Teachers	1,188
State of Michigan	1,119
Connecticut Trust Funds	1,116
Ameritech	1,000
NYNEX	964
United Nations Joint Staff	956
Virginia Supplemental	921
Illinois Teachers	886
New York State & Local	809
Ford Motor	800
Pennsylvania Employes	753
Florida State Board	751
Southwestern Bell	749
Eastman Kodak	730
Pennsylvania Schools	672
Ohio Public Employees	646
U S WEST	620
Westinghouse Electric	533
United Technologies	525
Minnesota State Board	511
Prudential Insurance	484
Oregon Public Employes	470
Wisconsin State Board	469
Colorado Employees	457
Illinois State Universities	449
Iowa Public Employees	442
Shell Oil	430
Illinois Municipal	398
New York State Teachers	366
Exxon	357
Allied-Signal	355
Chevron	326
Ohio School Employees	302
Pacific Gas & Electric	292
Kansas Public Employees	291
Illinois State Board	290
Nat'l Electrical Contractors	279
Hawaii State Employees	278
Monsanto	275
Los Angeles County	266
Utah State Retirement	252
Caterpillar	249
Alaska Retirement Systems	239
Maryland State Systems	238
Unisys	236
USX	225
Owens-Illinois	200
Presbyterian Church	200
Nevada Public Employees	199
Textron	192
World Bank	186
North Carolina	183
Ohio Police & Firemen	175
Minnesota Mining & Mfg.	174
Honeywell	173
RJR Nabisco	162
United Airlines	155
UMWA	150
Hercules	132
Idaho Public Employees	131
Hospital/Healthcare	130
San Francisco City/County	130
Chrysler	128
Inland Steel	125
Philadelphia City	121
Amoco	118
BP America	116
Grumman	115
ITT	115
Philip Morris	110
J.C. Penney	107
Aetna	104
Los Angeles Fire & Police	104
S. New England Telephone	100
GTE	96
Kentucky Retirement Systems	96
Detroit Systems	93
FPL Group	91
Texaco	91
CIGNA	90
Sears, Roebuck	88
Southern California UFCW	82
Delta Air Lines	80
Equitable Life Assurance	78
E.I. du Pont de Nemours	77
Travelers	73
Eli Lilly	69
Southern California Edison	67
Aluminum Co. of America	64
Chicago Municipal	64
Union Carbide	61
Plumbers National HQ	58
United Methodist Church	57
Louisiana State Employees	53
Maine State Retirement	53
Deere	50
K mart	49
Anheuser-Busch	48
GenCorp	46
Rhode Island Retirement	46
I.A.M. National Pension	44
Kentucky Teachers	41
Operating Engineers	34
Milwaukee City	33
New York Life	30
Phillips Petroleum	30
Chase Manhattan	23
Los Angeles City	23
Trans World Airlines	20
Southern Baptist	18
American Electric Power	15
Xerox	15
Raytheon	14
Bank of America	13
Alabama Systems	12
Teamsters, Central States	11
United Parcel Service	11
General Dynamics	5
Armco	4
Indiana Public Employees	4
Total	**43,656**

Defined contribution

Fund	($ millions)
TIAA-CREF	3,000
Xerox	240
Trans World Airlines	95
American Stores	76
Bechtel Power	72
United Methodist Church	62
United Parcel Service	37
Halliburton	33
Detroit Systems	15
Nat'l Electrical Contractors	13
Equitable Life Assurance	3
Evangelical Lutheran	3
Eli Lilly	1
Total	**3,650**

Real estate equity	8%
Mortgages	7%
International equities	4%

BOISE, Idaho — As of Sept. 30, the Public Employees Retirement System of Idaho's total employee benefit assets increased 23.1% to $1.643 billion from $1.335 billion a year earlier. All assets are defined benefit.

Equity managers: Domestic — Columbus Circle; Eaton Vance; Husic Capital; Mellon Capital; Mountain Pacific; Newell Associates; and Wellington.

International — Boston International; Rowe Price-Fleming; and Schroder Capital.

Fixed-income managers: Domestic — Sanford Bernstein; BEA; D.B. Fitzpatrick; and State Street Bank.

Real estate managers: Cabot, Cabot & Forbes; Equitable; LaSalle; J.W. O'Connor; and Prudential.

The master custodian and global trustee is Mellon Bank; the investment consultant is Dorn & Helliesen.

Philip Halpern is senior investment manager.

Illinois State Board of Investment

	($ millions)
Total assets	3,173
Defined benefit	3,173
Internally managed assets	1,200
Hedging devices used:	
Stock options	
Stock index futures	
Defined benefit asset mix:	
Stocks	44%
Fixed income	36%
Cash equivalents	6%
Real estate equity	9%
Mortgages	2%
Other	3%

CHICAGO — As of Sept. 30, the Illinois State Board of Investment's total employee benefit assets increased 17.5% to $3.173 billion from $2.7 billion as of June 30, 1988. All assets are defined benefit.

Equity managers: Domestic — Ariel; Cooke & Bieler; Disciplined; Fidelity Management; Lazard Freres; Lincoln; Newbold's; TCW; and Trinity.

International — Acadian; Brinson Partners; Globe Finlay; Hill Samuel; and Templeton.

Fixed-income managers: Domestic — Calamos; Delaware; Fidelity Management; J.P. Morgan; and TCW Global.

Real estate managers: Aetna; Amli; Heitman; JMB; Public Storage; TCW; and Zell Merrill Lynch.

LBO managers: KKR and Lazard Freres.

Venture capital managers: Frontenac; Golder Thoma Cressey; John Hancock; Menlo; and Prudential.

Other manager: Candover Partners.

Northern Trust is the master custodian and global custodian; the investment consultants are Callan and PCA.

Key personnel overseeing the investment management of the fund are Gregory C. Nagle, director; Larry Darlington, fixed-income portfolio manager; and Scott Pape, equity portfolio manager.

Illinois Municipal Retirement Fund

	($ millions)
Total assets*	4,326
Defined benefit	4,326
Employer DB contributions	171
Benefit payments	211

**as of Aug. 31, 1989*

Internally managed assets:	145
Hedging devices used:	
Bond options	
Fixed-income futures	
Defined benefit asset mix:	
Stocks	45.1%
Foreign stocks	8.9%
Fixed income	29.4%
Foreign bonds	2.7%
Cash equivalents	3.4%
Real estate equity	9.2%
Venture capital	1.3%

CHICAGO — As of Aug. 31, 1989, Illinois Municipal Retirement Fund's total employee benefit assets increased 20.5% to $4.326 billion from $3.591 billion as of Sept. 30, 1988. All assets are defined benefit.

Equity managers: Domestic — American National Bank; Campbell, Cowperthwait; Dillon Read; Dimensional; Fidelity Management; Frontier; Lincoln Capital; and Provident Investment.

International — American National Bank; Baring; Nomura; Schroder; and TIMCO.

Fixed-income managers: Domestic — American National Bank; Criterion; Fidelity Management; Neuberger & Berman; and Payden & Rygel.

International — Julius Baer.

Real estate managers: Brinson Partners; Equitable Real Estate; JMB; LaSalle; RREEF; Sentinel; and TCW.

Venture capital managers: Abbott; Brinson Partners; Larimer; and Oxford.

The master trustee is Northern Trust; the global custodian is Northern Trust-London; the investment consultants are Mercer Meidinger Hansen and Institutional Property Consultants.

Key personnel overseeing the investment management of the fund are Robert L. Cusma, executive director; Hiroshige Mori, director-investments; and Walter J. Koziol, investment manager.

Teachers' Retirement System of the State of Illinois

	($ millions)
Total assets	8,475
Defined benefit	8,475
Employer DB contributions	261
Benefit payments	477
Hedging devices used:	
Stock options	
Bond options	
Fixed-income futures	
Defined benefit asset mix:	
Stocks	48%
Fixed income	35%
Cash equivalents	6%
Real estate equity	11%

SPRINGFIELD, Ill. — As of Sept. 30, Teachers' Retirement System of the State of Illinois' total employee benefit assets increased 20.3% to $8.475 billion from $7.043 billion a year earlier. All assets are defined benefit.

Equity managers: Domestic — Alliance; American National Bank; Ariel; Brandywine; Brinson Partners; Cedar Hill; Eagle; Hotchkis and Wiley; Husic; Keystone; Lazard Freres; Lehman Ark; Lincoln; Morgan Stanley; Munder; NCM; Oppenheimer; RCM.

International — Murray Johnstone and State Street Bank.

Fixed-income managers: Domestic — Bear Stearns; PIMCO; and State Street Bank.

International — Brinson Partners.

Real estate managers: Bennett & Kahnweiler; F.I.A.; First Chicago; JMB; Jones Lang Wootton; and TCW.

Currency managers: Matuschka and N.M. Rothschild International.

Venture capital manager: Frontenac.

The master trustee is Harris Trust; the global custodian is State Street; the investment consultant is Callan.

The key person overseeing the investment management of the fund is William M. Stephens, chief investment officer.

State Universities Retirement System of Illinois

	($ millions)
Total assets	3,845
Defined benefit	3,845
Employer DB contributions	93
Benefit payments	166
Hedging devices used:	
Stock options	
Bond options	
Stock index futures	
Fixed income futures	
Defined benefit asset mix:	
Stocks	59%
Fixed income	29%
Real estate equity	12%

CHAMPAIGN, Ill. — As of Sept. 30, the State Universities Retirement System of Illinois' total employee benefit assets increased 24.8% to $3.845 billion from $3.08 billion a year earlier. All assets are defined benefit.

Equity managers: Domestic — Batterymarch; PIMCO; Fayez Sarofim; and Wells Fargo.

International — Wells Fargo.

Fixed-income managers: Domestic — PIMCO and Wells Fargo.

Real estate managers: Aetna; Equitable; JMB; and RREEF.

The master custodian is Northern Trust; the investment consultant is Ennis, Knupp.

Key personnel overseeing the investment management of the fund are Kenneth Codlin, investment officer, and Jeanne Valcik, associate investment officer.

Indiana Public Employees' Retirement System

	($ millions)
Total assets	2,817
Defined benefit	2,248
Defined contribution	569
Other	569
Employer DB contributions	160
Benefit payments	109
Defined benefit asset mix:	
Fixed income	100%
Defined contribution asset mix:	
Fixed income	100%

INDIANAPOLIS — As of Sept. 30, the State of Indiana Public Employees' Retirement System's total employee benefit assets decreased 3.8% to $2.817 billion from $2.927 billion a year earlier. Defined contribution assets are a mandatory employee contributory plan listed last year as part of the defined benefit plan.

Fixed-income managers: Domestic — Bank One Indianapolis; Indiana National Bank; Lehman Ark; T. Rowe Price; and Prime Capital.

The investment consultant is Performance Analytics Inc.

Key personnel overseeing the investment management of the fund are Phillip Smith, executive secretary; Michael A. Cherry, information officer; and Donal Bayne, controller.

Indiana State Teachers' Retirement Fund

	($ millions)
Total assets	1,700
Defined contribution	1,700
Other	1,700
Employer DC contributions	193
Defined contribution asset mix:	
Fixed income	100%

INDIANAPOLIS — As of Sept. 30, the Indiana State Teachers' Retirement Fund's total employee benefit assets increased 13.3% to $1.7 billion from $1.5 billion a year earlier. All assets are in an annuity purchase plan.

Fixed-income managers: Domestic — Alliance; Bank of New York; Bank One, Indianapolis; Baxter & Hoops; Indiana National Bank; Merchants Investment Counseling; and Todd.

The master trustee is Indiana National Bank.

Robert D. Newland is investment officer.

Inland Steel Industries Inc.

	($ millions)
Total assets	2,041
Defined benefit	1,655
Defined contribution	386
Other	386
Employer DB contributions	0
Benefit payments	106
Employer DC contributions	10
Hedging devices used:	
Stock options	
Bond options	
Stock index futures	
Fixed-income futures	
Defined benefit asset mix:	
Stocks	51.1%
Fixed income	27.5%
Cash equivalents	10.3%
Real estate equity	7.4%
GICs/BICs	3.7%
Defined contribution asset mix:	
Company stock	10.4%
Other stock	4.3%
GICs/BICs	85.3%

CHICAGO — As of Sept. 30, Inland Steel Industries Inc.'s total employee benefit assets increased 20.1% to $2.041 billion from $1.7 billion a year earlier. Defined benefit assets increased 18.2% during the same period, to $1.655 billion from $1.4 billion. Defined contribution assets increased 28.7% to $386 million from $300 million.

Equity managers: Domestic — Sanford Bernstein; Brinson Partners; Chancellor; Dillon, Read; DFA; INVESCO; Oppenheimer; Putnam Advisory; State Street Research; and Waddell & Read.

International — Baring International; Brinson Partners; and Putnam International.

Fixed-income manager: Domestic — Lincoln Income Group.

Real estate managers: Cabot, Cabot & Forbes; Equitable; Grubb & Ellis; JMB; Prudential; and Zell Merrill Lynch.

The master trustee is Northern Trust; the global custodian is Northern Trust/Banc Scandinave; the investment consultant is DeMarche Associates.

The key personnel overseeing the investment management of the funds' assets are Jay E. Dittus, treasurer; Richard J. Schutter, director-pension investments and administration; and Vicki L. Avril, manager-pension investments.

International Paper Co.

	($ millions)
Total assets*	2,709
Defined benefit	2,100
Defined contribution	609
Employer DB contributions	90

**From Money Market Directory*

PURCHASE, N.Y. — According to Money Market Directory, International Paper Co. had $2.709 billion in total employee benefit assets as of July 31, an increase of 20.3% from $2.252 billion as of Sept. 30, 1988. Defined benefit assets increased 13.5% to $2.1 billion from $1.851 billion during the same period. Defined contribution assets increased 51.9% to $609 million from $401 million.

Myra Drucker, director-trust investments, oversees investment management of the fund.

Iowa Public Employees Retirement System

	($ millions)
Total assets	4,900
Defined benefit	4,900
Employer DB contributions	135
Benefit payments	155
Internally managed assets	88
Hedging devices used:	
Stock index futures	
Defined benefit asset mix:	
Stocks	39%
Fixed income	42%
Cash equivalents	2%
Real estate equity	10%
Other	7%

DES MOINES, Iowa — As of Sept. 30, the Iowa Public Employees Retirement System's total employee benefit assets were $4.9 billion. All assets are defined benefit.

Equity managers: Domestic — Batterymarch; Capital Guardian; Invista; Mellon Capital; Prudential; RCM; and Wellington.

International — Hill Samuel; Nomura; Philippe; and Schroder.

Fixed-income managers: Domestic — Boston Co.; Criterion; Loomis, Sayles; Miller, Anderson & Sherrerd; and J.P. Morgan.

Real estate managers: AEW; Copley; Heitman; and JMB.

Other managers: Allsop; Cable & Howse; Gibbons, Green; Golder, Thoma; Interven; Invest America; KKR; Lawrence; Menlo; Steinberg, Lyman; Summit; TCW; and WCAS.

The master trustee and global custodian is Boston Safe Deposit; the investment management consultant is Wilshire Associates.

Key personnel overseeing the investment management of the fund are Dennis Jacobs, deputy administrator-investments, and Larry Thompson, investment officer.

ITT Corp.

	($ millions)
Total assets	2,497
Defined benefit	1,615
Defined contribution	882
Thrift or savings	882
Employer DB contributions	32
Benefit payments	84

Top 200 plans with assets in venture capital

Defined benefit

Fund	($ millions)
AT&T	500
Washington State Board	348
State of Michigan	269
General Electric	250
GTE	200
U S WEST	200
Ameritech	170
University of California	144
Illinois Teachers	137
Los Angeles County	137
Chicago Municipal	85
Honeywell	81
United Technologies	80
Minnesota State Board	75
Sears, Roebuck	74
California State Teachers	71
Southwestern Bell	70
Oregon Public Employes	67
Pennsylvania Employes	66
Exxon	63
E.I. du Pont de Nemours	62
Unisys	61
Ford Motor	60
Pennsylvania Schools	60
Illinois Municipal	57
New York State & Local	53
NYNEX	53
Wisconsin State Board	52
Aluminum Co. of America	50
Delta Air Lines	50
Philip Morris	50
Prudential Insurance	44
American Electric Power	38
Colorado Employees	37
New York State Teachers	36
Illinois State Board	35
Owens-Illinois	35
BP America	31
Utah State	30
World Bank	29
Southern California Edison	29
Ohio Public Employees	27
Ohio School Employees	27
Deere	25
Iowa Public Employees	24
TRW	24
Chevron	23
Westinghouse Electric	23
Ohio State Teachers	22
Connecticut Trust Funds	20
J.C. Penney	17
Grumman	15
Ohio Police & Firemen	13
S. New England Telephone	11
Bank of America	10
San Francisco City/County	10
Textron	9
Nevada Public Employees	8
Rhode Island	7
Minnesota Mining & Mfg.	6
Armco	6
Eli Lilly	6
Inland Steel	5
Oklahoma Teachers	5
Philadelphia City	5
Tenneco	4
Virginia Supplemental	3
Xerox	1
Total	**4,395**

Defined contribution

Fund	($ millions)
Xerox	17
University of California	5
Pan Am	3
Total	**25**

Defined benefit asset mix:	
Stocks	62%
Fixed income	21%
Cash equivalents	6%
Real estate equity	7%
Other	4%
Defined contribution asset mix:	
Company stock	35%
Other stock	10%
Cash equivalents	4%
GICs/BICs	51%

NEW YORK — As of Sept. 30, ITT Corp.'s total employee benefit assets decreased 4% to $2.497 billion from $2.602 billion a year earlier. Defined benefit assets decreased 13.7% during the same period, to $1.615 billion from $1.871 billion. Defined contribution assets increased 20.7% to $882 million from $731 million.

Equity managers: Domestic — Alliance; American Fund; Barrow, Hanley, Mewhinney & Strauss; First Manhattan; GAMCO; Jennison; Northern Investment Management; and Verus Capital.

International — Alliance International; Capital Guardian; and Lazard Freres.

Fixed-income managers: Domestic — Alliance; J.P. Morgan; and State Street Research.

International — J.P. Morgan and WorldInvest.

Real estate managers: Coldwell Banker; Corporate Property Investors; Equitable; Metropolitan; and RREEF.

Other managers: Blackstone; Alex. Brown; Butler Capital; Corporate Advisors; Harry Gray; Kohlberg & Co.; KKR; and Morgan Petroleum.

The master trustee is Northern Trust; the global custodian is Northern Trust London.

Key personnel overseeing the investment management of the fund are Edwin J. Ehrlich, director-pension fund trusts; and Eileen C. Leahy, manager-pension fund trusts.

K

K mart Corp.

	($ millions)
Total assets	1,775
Defined benefit	1,084
Defined contribution	691
Other	691
Employer DB contributions	0
Benefit payments	33
Employer DC contributions	37
Internally managed assets:	
Total DB	237
Hedging devices used:	
Stock options	
Stock index futures	
Defined benefit asset mix:	
Stocks	55.2%
Fixed income	21.8%
Cash equivalents	7.1%
Real estate equity	4.5%
GICs/BICs	9.5%
Annuities	1.9%
Defined contribution asset mix:	
Company stock	41.7%
Other stock	8.5%
GICs/BICs	49.8%

TROY, Mich. — As of Sept. 30, K mart Corp.'s total employee benefit assets increased 17.6% to $1.775 billion from $1.509 billion as of June 30, 1988. Defined benefit assets increased 16.4% during the same period, to $1.084 billion from $931 million. Defined contribution assets increased 19.6%, to $691 million from $578 million.

Equity managers: Domestic — Alliance; Avatar; Capital Guardian; DFA; and Westridge.

Real estate managers: Equitec and JMB.

GIC managers: New York Life and Pacific Mutual.

Annuity manager: John Hancock.

The master trustee is National Bank of Detroit.

Key personnel overseeing the investment management of the fund are John Steinbach, assistant treasurer and investment manager, and William F. Camp, assistant investment manager.

Kansas Public Employees Retirement System

	($ millions)
Total assets	3,692
Defined benefit	3,692
Employer DB contributions	77
Benefit payments	152
Internally managed assets	92
Hedging devices used:	
Stock options	
Bond options	
Stock index futures	
Fixed-income futures	
Defined benefit asset mix:	
Stocks	31.7%
Fixed income	32.6%
Cash equivalents	12.2%
Real estate equity	8.1%
Other	15.4%

TOPEKA, Kan. — As of Sept. 30, the Kansas Public Employees Retirement System's total employee benefit assets increased 16.3% to $3.692 billion from $3.175 billion a year earlier. All assets are defined benefit.

Equity managers: Domestic — Capital Supervisors; Delaware Investment; Loomis, Sayles; Market Research Management; Pilgrim Baxter Greig; and Provident Investment.

International — Alliance and Nomura.

Fixed-income managers: Domestic — Loomis, Sayles; Peters, Gamm & West; and PIMCO.

International — Julius Baer.

Real estate managers: Lehndorff & Babson and O'Connor Group.

Cash manager: Payden & Rygel.

Direct placement managers: Reimer & Koger and Peters, Gamm & West.

The master custodian is Commerce Bank & Trust; the global custodian is Bankers Trust; the investment consultant is Callan.

Key personnel overseeing the investment management of the fund are Tom Hamill, chairman-board of trustees, and Marshall Crowther, executive secretary.

Kentucky Retirement Systems

	($ millions)
Total assets	3,200
Defined benefit	3,200
Employer DB contributions	196
Benefit payments	120
Internally managed assets:	
Total DB	1,300
Defined benefit asset mix:	
Stocks	37%
Fixed income	35%
Cash equivalents	25%
Real estate equity	3%

FRANKFORT, Ky. — As of Sept. 30, the Kentucky Retirement Systems' total employee benefit assets increased 28% to $3.2 billion from $2.5 billion a year earlier. All assets are defined benefit.

Equity manager: Domestic — Capital Supervisors.

Fixed-income managers: Domestic — Capital Supervisors and Munder Capital.

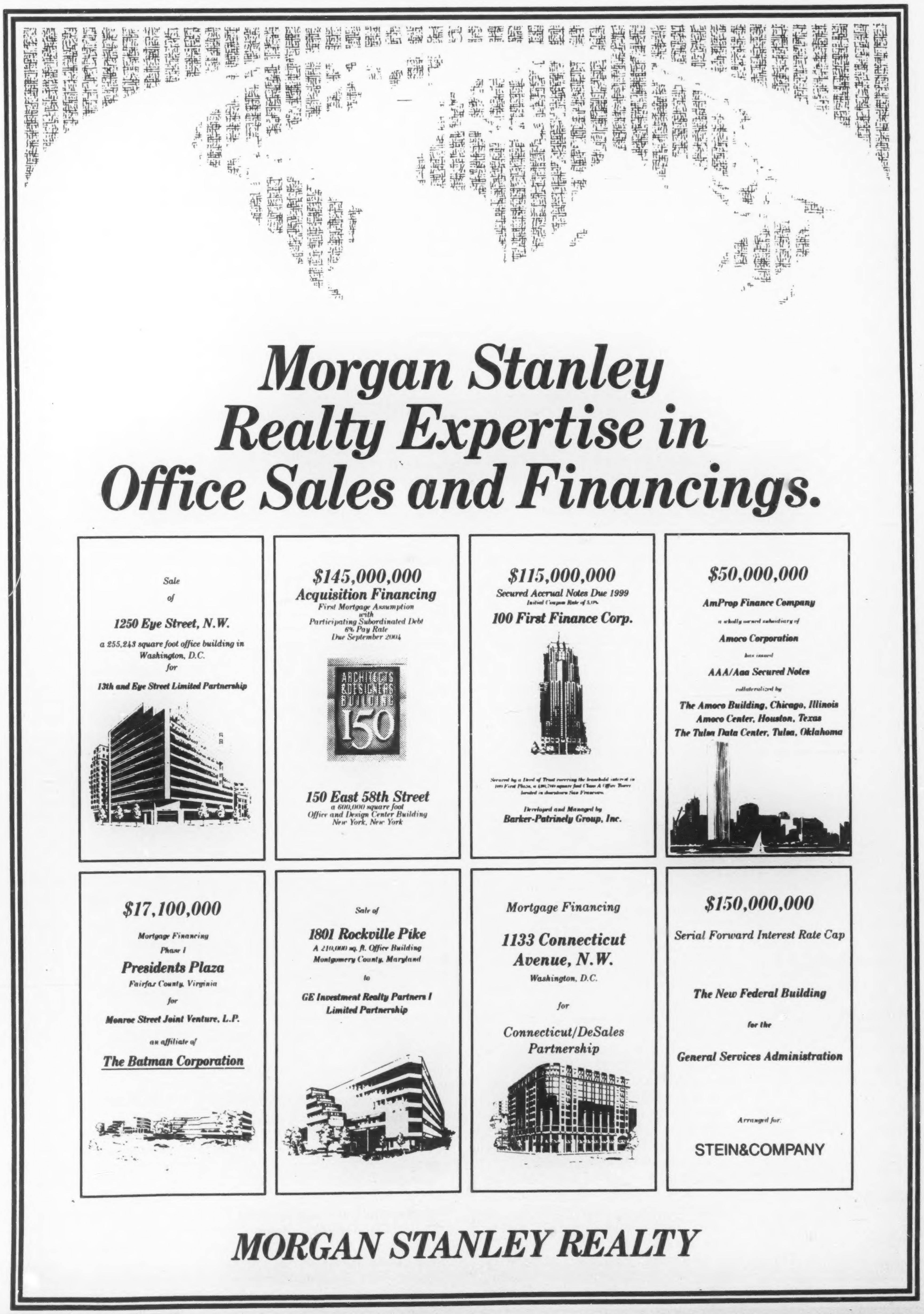
Real estate manager: Heitman.

The master trustee is Farmers Bank & Capital Trust; the investment consultant is Mercer Meidinger Hansen.

Key person overseeing the investment management of the fund is Marlene O. Castle, investment officer.

Kentucky Teachers' Retirement System

	($ millions)
Total assets	3,461
Defined benefit	3,461
Employer DB contributions	178
Benefit payments	195
Internally managed assets	262
Defined benefit asset mix:	
Stocks	29%
Fixed income	49%
Cash equivalents	9%
Real estate equity	1%



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Secured Accrual Notes Due 1999
Initial Coupon Rate of [illegible]
100 First Finance Corp.
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Developed and Managed by
Barker-Patrinely Group, Inc.

$50,000,000
AmProp Finance Company
a wholly owned subsidiary of
Amoco Corporation
has issued
AAA/Aaa Secured Notes
collateralized by
The Amoco Building, Chicago, Illinois
Amoco Center, Houston, Texas
The Tulsa Data Center, Tulsa, Oklahoma

$17,100,000
Mortgage Financing
Phase I
Presidents Plaza
Fairfax County, Virginia
for
Monroe Street Joint Venture, L.P.
an affiliate of
The Batman Corporation

Sale of
1801 Rockville Pike
A 210,000 sq. ft. Office Building
Montgomery County, Maryland
to
GE Investment Realty Partners I
Limited Partnership

Mortgage Financing
1133 Connecticut
Avenue, N.W.
Washington, D.C.
for
Connecticut/DeSales
Partnership

$150,000,000
Serial Forward Interest Rate Cap
The New Federal Building
for the
General Services Administration
Arranged for:
STEIN&COMPANY

MORGAN STANLEY REALTY

Mortgages	3%
Mortgage-backed securities	9%

FRANKFORT, Ky. — As of Sept. 30, the Kentucky Teachers' Retirement System's total employee benefit assets increased 21.9% to $3.461 billion from $2.84 billion as of June 30, 1988. All assets are in defined benefit plans.

Equity managers: Domestic — INVESCO and Todd.

Fixed-income managers: Domestic — First Kentucky Co. and Todd.

The master custodian is Farmers *Bank & Capital Trust*.

Key personnel overseeing the investment management of the fund are Pat Miller, executive secretary; Stuart Reagan, chief investment officer; and Paul Yancey, investment analyst.

L

Eli Lilly & Co.

	($ millions)
Total assets	2,432
Defined benefit	1,410
Defined contribution	1,022
401(k)/KSOP	1,022
Employer DB contributions	42
Benefit payments	58
Employer DC contributions	31
Internally managed assets:	
Total DC	315
Hedging devices used:	
Stock index futures	
Defined benefit asset mix:	
Stocks	66.3%
Fixed income	13.1%
Cash equivalents	10.7%
Real estate equity	4.7%
GICs/BICs	4.5%
Other	0.7%
Defined contribution asset mix:	
Company stock	63%
Other stock	9%
Fixed income	1%
GICs/BICs	27%

Top 200 funds with assets in dedicated/immunized bonds

Defined benefit

Fund	($ millions)
Maryland State Systems	5,011
Minnesota State Board	4,800
Ameritech	3,300
U S WEST	2,700
General Electric	2,258
Southwestern Bell	2,084
Navistar	1,855
UMWA	1,700
Aluminum Co. of America	1,524
Caterpillar	1,080
American Airlines	1,000
Equitable Life	634
Armco	575
Tennessee Valley Authority	567
PPG Industries	532
Raytheon	486
Deere	485
Nevada Public Employees	473
Inland Steel	468
Unisys	428
Hercules	379
Milwaukee City	378
Ohio State Teachers	272
Phillips Petroleum	200
Pennsylvania Schools	179
Florida State Board	155
S. New England Telephone	153
Pan Am	97
Procter & Gamble	94
Teamsters, Central States	75
United Technologies	60
United Methodist Church	57
Bakery & Confectionery	20
Hospital/Healthcare	2
Total	**34,081**

Defined contribution

Fund	($ millions)
United Methodist Church	182
Unisys	144
New York Life	7
Total	**333**

INDIANAPOLIS — As of Sept. 30, Eli Lilly & Co.'s total employee benefit assets increased 30.3% to $2.432 billion from $1.867 billion a year earlier. Defined benefit assets increased 29.5% during the same period, to $1.41 billion from $1.089 billion. Defined contribution assets increased 31.4%, to $1.022 billion from $778 million.

Equity managers: Domestic — Ardsley; Capital Guardian; Mellon Capital; Northern Investment; Reams; W.H. Reaves; and United Capital.

International — Nikko and State Street.

Bond manager: Reams.

Real estate managers: GE Investment; JMB; and RREEF.

GIC managers: Bank One, Indianapolis and Northern Investment.

Venture capital managers: Battery Ventures; Cable & Howse; CID; DSV; Prime Capital; RCS; and Summit.

LBO manager: Harbour Group.

The master trustee is Northern Trust.

Key personnel overseeing the investment management of the fund are Frederick W. Ruebeck, director-investments administration; Karen L. Hardwick, financial associate; and Michael W. Neal, financial adviser.

Lockheed Corp.

	($ millions)
Total assets*	8,926
Defined benefit	6,247
Defined contribution	2,679

**P&I estimate*

CALABASAS, Calif. — As of Sept. 30, *Pensions & Investments* estimates Lockheed Corp.'s total employee benefit assets were $8.926 billion, based on the $7.411 the company said it had as of Dec. 31, 1988.

Managers: — Alliance; Anhalt/O'Connell; Bankers Trust; Batterymarch; Capital Guardian; Chase Investors; Chancellor; Delaware Investment; DSI International; First Interstate, Washington; Hotchkis and Wiley; Karsten; Investment Research; Lombard Odier; Mellon Bank; Mitchell Hutchins; J.P. Morgan; Pacific Financial; Payden & Rygel; RREEF; SBC; Fayez Sarofim; Security Pacific; Smith Barney; TCW; Western Asset; Westwood Management; and Wright.

Bankers Trust is the master trustee and global custodian.

Key personnel overseeing the investment management of the fund are George C. Weintz, investment counsel, and Sheldon J. Lieberman, trust fund performance manager.

Los Angeles City Retirement System

Total assets*	2,497
Defined benefit	2,497
Employer DB contributions	167
Benefit payments	147

**as of June 30, 1989*

Internally managed assets:	
Total DB	316
Defined benefit asset mix:	
Stocks	38.27%
Fixed income	48.15%
Cash equivalents	12.65%
Real estate equity	0.93%

LOS ANGELES — As of June 30, Los Angeles City Retirement System's total employee benefit assets increased 13.9% to $2.497 billion from $2.193 billion nine months earlier. All assets are defined benefit.

Equity managers: Domestic — Ariel; Bailard, Biehl & Kaiser; Bankers Trust; Loomis, Sayles; and Security Pacific Investment Management.

Fixed-income managers: Domestic — Chemical Investment and Loomis Sayles.

Real estate managers: AEW; LaSalle; Lehndorff & Babson.

The master custodian is Bank of New York; the investment consultant is SEI.

Key personnel overseeing the investment management of the fund are Jerry Bardwell, general manager; Daniel Gallagher, investment officer; and Oscar Peters, assistant general manager.

Los Angeles County Employees' Retirement Association

	($ millions)
Total assets*	9,359
Defined benefit	9,359
Employer DB contributions	384
Benefit payments	390

**as of June 30, 1989*

Internally managed assets:	
Total DB	69
Hedging devices used:	
Stock index futures	
Fixed-income futures	
Defined benefit asset mix:	
Stocks	40.02%
Fixed income	32.5%
Cash equivalents	21.97%
Real estate equity	2.84%
Mortgages	1.21%
Venture capital	1.46%

LOS ANGELES — As of June, 30, Los Angeles County Employees' Retirement Association's total employee benefit assets increased 7% to $9.359 billion from $8.744 billion nine months earlier. All assets are defined benefit.

Equity managers: Domestic — Capital Guardian; Loomis, Sayles; Security Pacific; Stein, Roe; Morgan Stanley Asset; Pacific Century; Putnam Advisory; Pilgrim, Baxter, Greig; and Weiss, Peck & Greer.

International — Brown Brothers Harriman; Capital Guardian; Chase Investors; Daiwa; Morgan Grenfell; Warburg Investment.

Fixed-income managers: Domestic — Brown Brothers Harriman; Capital Guardian;CMB Investment; Criterion; Massachusetts Financial; and J.P. Morgan.

Real estate managers: Equitable; Goldman, Sachs; Heitman; JMB: Prudential; PSI; Sentinel; Shurgard; TCW; and Trammell Crow.

Short-term/cash manager: Discount Corp. of New York.

Venture capital managers: Copley Venture Partners; Harry Gray, Mel Klein & Partners; Prudential; TA Associates Communications; E.M. Warburg, Pincus.

The master custodian is Security Pacific; the global custodian is Chase Manhattan; the investment consultant is Callan.

Key personnel overseeing the investment management of the fund are Charles F. Conrad, retirement administrator; Diane Sandoval, manager, retirement accounting; and Fred Whiting, manager retirement systems.

Los Angeles Fire & Police Pension System

	($ millions)
Total assets	3,477
Defined benefit	3,477
Employer DB contributions	288
Benefit payments	247
Internally managed assets:	
Total DB	157
Hedging devices used:	
Stock options	
Defined benefit asset mix:	
Stocks	66.3%
Fixed income	26.2%
Cash equivalents	4.5%
Real estate equity	3%

LOS ANGELES — As of Sept. 30, Los Angeles Fire & Police Pension System's total employee benefit assets increased 25.3% to $3.477 billion from $2.774 billion a year earlier. All assets are defined benefit.

Equity managers: Domestic — Alliance; Amerindo; Balch Hardy; BMI; Frontier; Husic; Loomis, Sayles; MCQ; Oppenheimer; Security Pacific; and Target.

International: Globe Finlay; Hill Samuel; Nomura; and Oechsle.

Fixed-income managers: Domestic — Boston Co.; Cypress; Magten; and Security Pacific.

Real estate managers: Boston Co.; Equitable; JMB; Prudential; Sentinel.

The master custodian and global custodian is Bankers Trust.

Key personnel overseeing the investment management of the fund are Gary Mattingly, general manager; Allan Moore, assistant manager; and Dennis Sugino, chief investment officer.

Los Angeles Department of Water & Power Employees' Retirement Plan

	($ millions)
Total assets*	1,800
Defined benefit	1,800
Employer DB contributions	115
Benefit payments	112

**as of June 30, 1989*

Internally managed assets:	
Total DB	100
Hedging devices used:	
Stock options	
Defined benefit asset mix:	
Stocks	33%
Fixed income	48%
Cash equivalents	10%
Mortgages	9%

LOS ANGELES — As of June 30, the Los Angeles Department of Water and Power Employees' Retirement Plan's total employee benefit assets increased 19.7% to $1.8 billion from $1.504 billion a year earlier. All assets are defined benefit.

Managers: Boston Co.; Merus; and TCW.

The master trustee is Security Pacific.

Key person overseeing the investment management of the fund is Clarence Brawn, investment manager.

Louisiana State Employees' Retirement System

	($ millions)
Total assets	2,250
Defined benefit	2,250
Employer DB contributions	133
Benefit payments	223
Internally managed assets	542
Defined benefit asset mix:	
Stocks	24%
Fixed income	58%
Cash equivalents	15%
Real estate equity	2%
CDs	1%

BATON ROUGE, La. — As of Sept. 30, the Louisiana State Employees' Retirement System's total employee benefit assets increased 12.4% to $2.25 billion from $2.001 billion a year earlier. All the assets are defined benefit.

Equity managers: Domestic — Boston Co.; Eagle Asset; and Merus.

Fixed-income managers: Domestic — Denver Investment; Duff & Phelps; INVESCO; and Mitchell Hutchins.

Real estate managers: Equitable; JMB; Metropolitan Life; and PSI.

The master trustee is Bank of New York; the investment consultant is SEI.

Key personnel overseeing the investment management of the fund are Vernon L. Strickland, chief investment officer; and Nick Montagnino Jr. and Calla E. McManus, investment officers.

Teachers' Retirement System of Louisiana

	($ millions)
Total assets*	3,265
Defined benefit	3,265
Employer DB contributions	198
Benefit payments	350

**as of June 30, 1989*

Internally managed assets	520
Defined benefit asset mix:	
Stocks	28%
Fixed income	55%
Cash equivalents	17%

BATON ROUGE, La. — As of June 30, the Teachers' Retirement System of Louisiana's total employee benefit assets increased 15.2% to $3.265 billion from $2.833 billion a year earlier. All assets are defined benefit.

Equity managers: Domestic — Boston Co.; Eagle; INVESCO; and Sun Bank.

Fixed-income managers: Domestic — Boatmen's; Criterion; Hibernia; Massachusetts Financial; and Scudder, Stevens & Clark.

The master custodian is City National Bank of Baton Rouge; the investment consultant is SEI.

Key personnel overseeing the investment management of the fund are

Top 200 funds with assets in mortgage-backed securities

Defined benefit

Fund	($ millions)
New York City	8,478
California Employees	8,400
Ohio Public Employees	4,100
Texas Teachers	3,500
New York State & Local	3,281
California State Teachers	3,185
New Jersey	3,180
Ohio State Teachers	1,926
Teamsters, Central States	1,827
North Carolina	1,717
E.I. du Pont de Nemours	1,485
New York State Teachers	1,424
State of Michigan	1,382
Pennsylvania Schools	1,263
Texas Employees	1,139
South Carolina	1,095
General Electric	1,007
Bethlehem Steel	935
Missouri Public Schools	808
Louisiana State	685
Indiana Public Employees	683
Tennessee Consolidated	600
Ohio School Employees	595
Los Angeles County	542
Alabama Systems	523
Pennsylvania Employes	516
Washington State Board	506
Kentucky Retirement	424
Iowa Public Employees	415
Ohio Police & Firemen	388
USX	365
Kentucky Teachers	321
Louisiana Teachers	300
Utah State Retirement	267
Maryland State Systems	244
Navistar	237
Connecticut Trust Funds	236
New Mexico Employees	220
GenCorp	205
Nevada Public Employees	190
Shell Oil	177
Exxon	176
Armco	172
Los Angeles Fire & Police	151
Illinois State Board	150
New Mexico Educational	146
Los Angeles Water & Power	143
Detroit Systems	123
Northrop	115
Bank of America	114
Inland Steel	114
Grumman	90
Commonwealth Edison	67
Oklahoma Teachers	51
Idaho Public Employees	50
Presbyterian Church	50
Kansas Public Employees	47
United Airlines	40
Tennessee Valley Authority	38
Owens-Illinois	35
Illinois Municipal	31
United Methodist Church	28
Operating Engineers	18
Hawaii State Employees	7
Pan Am	6
Nat'l Rural Electric Co-op	5
Total	**60,738**

Defined contribution

Fund	($ millions)
TIAA-CREF	2,000
Evangelical Lutheran	280
Detroit Systems	75
Bechtel Power	33
United Methodist Church	31
UMWA	1
Total	**2,420**

Jennifer Netterville, investment officer, and Carleton C. Page, director/secretary-treasurer.

Board of Pensions Evangelical Lutheran Church in America

	($ millions)
Total assets	1,782
Defined contribution	1,782
Other	1,782
Internally managed assets:	
Total DC	1,407
Defined contribution asset mix:	
Stock	47.5%
Fixed income	50.9%
Real estate/oil and gas	1%
Convertible securities	0.6%

MINNEAPOLIS — As of Sept. 30, the Board of Pensions Evangelical Lutheran Church in America's total employee benefit assets increased 25.5% to $1.782 billion from $1.42 billion a year earlier. All assets are in a defined contribution plan, a 403(b).

Equity managers: Domestic — Loomis Sayles; Merrill Lynch; and Wells Fargo.

International — Brinson Partners.

Fixed-income managers: Domestic — Baring America and London Investments.

The master trustee and the global custodian is Boston Safe.

The key person overseeing the investment management of the fund is John G. Kapanke, president.

M

Maine State Retirement System

	($ millions)
Total assets	1,800
Defined benefit	1,800
Employer contibutions	187
Benefit payments	168
Defined benefit asset mix:	
Stocks	51.6%
Fixed income	30.8%
Cash equivalents	14.5%
Real estate equity	3%
Oil & gas	0.1%

AUGUSTA, Maine — As of Sept. 30, Maine State Retirement System's total employee benefit assets increased 24% to $1.8 billion from $1.452 billion a year earlier. All assets are defined benefit.

Equity managers: Domestic — Alliance; Columbus Circle; Dillon Read; Gouws Capital; and Lehman Management.

International — Bankers Trust and State Street.

Fixed-income managers: Domestic — Alliance; Massachusetts Financial; and Putnam Advisory.

Real estate manager: PCA.

The master custodian is Boston Safe Deposit; the investment consultant is Wilshire.

Key personnel overseeing the investment management of the fund are Claude R. Perrier, executive director, and William B. Ross, investment account coordinator.

Martin Marietta Corp.

	($ millions)
Total assets	3,201
Defined benefit	2,184
Defined contribution	1,017
Other	1,017
Employer DB contributions	2
Benefit payments	83
Employer DC contributions	41
Internally managed assets:	
Total DB	633
Defined benefit asset mix:	
Stocks	32%
Fixed income	14%
Cash equivalents	54%
Defined contribution asset mix:	
Company stock	11.8%
Other stock	23.5%
GICs/BICs	64.7%

BETHESDA, Md. — As of Sept. 30, Martin Marietta Corp.'s total employee benefit assets increased 13.1% to $3.201 billion from $2.829 billion a year earlier. Defined benefit assets increased 9.1% during the same period, to $2.184 billion from $2.001 billion. Defined contribution assets increased 22.8%, to $1.017 billion from $828 million.

Equity managers: Domestic — Breau Capital; Capital Guardian; Invista Capital; Pioneering Management; State Street Research; and Robert E. Torray.

Fixed-income manager: Domestic — T. Rowe Price.

The master trustee and global custodian is Bankers Trust; the investment consultant is Investment Management Controls/EAI.

Key personnel overseeing the investment management of the fund are Wayne H. Shaner, assistant treasurer-pension investments; Shawn M. Hendon, director-pension investments; and Wendy J. Thomson, administrator-pension investments.

Maryland State Retirement & Pension Systems

	($ millions)
Total assets	11,065
Defined benefit	11,065
Employer DB contributions*	597
Benefit payments*	493

**as of June 30, 1989*

Internally managed assets	8,328
Defined benefit asset mix:	
Stocks	31%
Fixed income	64%
Cash equivalents	1%
Real estate equity	2%
Other	2%

BALTIMORE — As of Sept. 30, the Maryland State Retirement & Pension Systems' employee benefit assets increased 26.9% to $11.065 billion from $8.717 billion a year earlier. All assets are in defined benefit plans.

Equity managers: Domestic — Bankers Trust; Capital Guardian; Dimensional; Hagler, Mastrovita & Hewitt; Investment Counselors of Maryland; Scudder, Stevens; and Wellington Trust.

Fixed-income managers: Domestic — Investment Counselors of Maryland; Mercantile Safe; Pacific Investment; and Standish, Ayer & Wood.

Real estate managers: CIGNA; Copley; J.P. Morgan; and Sentinel.

First National Bank of Maryland is custodian.

Key personnel overseeing the investment management of the fund are Howard J. France, chief investment officer; Lawrence J. Bach, director-passive management; and Arthur M. Lynch Jr., director-actively managed assets.

Public funds: Oct. 29.

Commonwealth of Massachusetts Teachers' and Employees' Pension Fund

	($millions)
Total assets*	6,650
Defined benefit	6,650
Employer DB contributions	1,121

**From Money Market Directory*

BOSTON — As of June 30, the Commonwealth of Massachusetts Teachers' & Employees' Pension Fund's total employee benefit assets were $6.65 billion, according to Money Market Directory. All assets are defined benefit.

Equity managers: Bailaird, Biehl & Kaiser; Capital Guardian; Constitution Capital; Gardner & Preston Moss; Guinness Mahon; Hagler, Mastrovita and Hewitt; J.M. Hartwell; Independence; INVESCO; Keystone; Manufac-

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turers Life; Massachusetts Financial; New Enterprise Association IV; One Federal Asset; Scudder, Stevens & Clark; Standish, Ayer & Wood; State Street Bank; State Street Research; Trinity; Wellington Management; and Wellington International.

Fixed-income managers: Delphi; Fiduciary Trust International; Gardner & Preston Moss; WR Lazard; Loomis, Sayles; Miller, Anderson and Sherrerd; PIMCO; and Standish, Ayer & Wood.

Real estate managers: Copley; Franklin; First Chicago; Hancock; Lehndorff & Babson; Narragansett; Pru-Bache Security; PSI; Sierra Capital; and State Street.

Venture capital/leveraged buy-out managers: Beta Partnership; Clayton & Dubilier; Frontenac; Hancock; Prudential; TA Associates; Vista; and WCAS Capital.

Key personnel overseeing the investment management of the fund are Robert Q. Crane, treasurer; Richard V. Kelly Sr., assistant treasurer; and Alan West, chief investment officer.

Massachusetts Pensions Reserve Investment Management Board

	($ millions)
Total assets	2,791
Internally managed assets:	
Total	29
Asset mix:	
Stocks	54.2%
Fixed income	30.4%
Cash equivalents	1%
Real estate equity	12.2%
Venture capital	2.2%

BOSTON — As of Sept. 30, Massachusetts Pensions Reserve Investment Management Board's total employee benefit assets increased 18.1% to $2.791 billion from $2.364 billion a year earlier.

Equity managers: Domestic — Alliance; Bear Stearns; Boston Co.; Lazard Freres; Trinity Investment; and U.S. Trust Co.

International — Baring; Oechsle; Schroder; Scudder, Stevens & Clark; and State Street.

Fixed-income managers: Domestic — Baring America; Lehman Ark; One Federal; Putnam; and M.D. Sass.

International — Baring International; N.M. Rothschild.

Real estate managers: AEW; Bank of Boston; Copley; Hancock; Heitman; JMB; Lomas & Nettleton; Massachusetts Mutual; and TCW.

Venture capital managers: Advent; Davis Venture; Golder, Thoma; John Hancock; Morgan Holland; Massachusetts Technology Development Corp.; Alan Patricof; Southern California Ventures; Venture Capital of New England; and Vista Ventures.

Special equities managers: Advent; Boston Ventures; Forstmann Little; INVESCO; KKR; MMG Patricof; Schroder UK Buyout Fund; Smith Offshore; and Weintraub.

The master custodian and global custodian is State Street Bank; the investment consultant is Wilshire.

Key personnel overseeing the investment management of the fund are Paul F. Quirk, executive director; Philip Kett, chief investment officer; and Elizabeth McLaughlin, finance director.

McDonnell Douglas Corp.

	($ millions)
Total assets	7,589
Defined benefit	5,911
Defined contribution	1,678

ST. LOUIS — As of Sept. 30, McDonnell Douglas Corp.'s total employee benefit assets increased 17.4% to $7.589 billion from $6.462 billion a year earlier. Defined benefit assets increased 18.2% during the same period, to $5.911 billion from $5 billion. Defined contribution assets increased 14.8%, to $1.678 billion from $1.462 billion.

Key personnel overseeing the investment management of the fund are David Hammerstein, director-retirement funds management; Sheryl L. Kwiatek, manager-retirement funds management; and Anthony J. Mangoff, investment analyst.

Metropolitan Life Insurance

	($ millions)
Total assets*	3,393
Defined benefit	2,446
Defined contribution	947
Thrift or savings	947
Employer DB contributions	0
Benefit payments	39
Employer DC contributions	27
Internally managed assets:	
Total DB	2,446
Total DC	947
Defined benefit asset mix:	
Stocks	25.2%
Fixed income	61.6
Real estate equity	13.2%
Defined contribution asset mix:	
Fixed income	83.5%
Other stock	16.5%

**P&I estimate*

NEW YORK — As of Sept. 30, Metropolitan Life's total employee benefit assets were estimated at $3.393 billion based on the company's figure of $3.022 billion as of Dec. 31, 1988. The defined contribution plan is a thrift plan with a 401(k) option.

All assets are managed internally.

The key person overseeing the plan is Arthur Typermass, treasurer.

State of Michigan Employees' Retirement Systems

	($ millions)
Total assets	17,948
Defined benefit	17,948
Employer DB contributions	870
Benefit payments	975
Internally managed assets:	
Total DB	17,341
Hedging devices used:	
Stock index futures	
Defined benefit asset mix:	
Stocks	39.2%
Fixed income	27.2%
Cash equivalents	18.7%
Real estate equity	6.2%
Mortgages	6.1%
Venture capital/LBOs	2.6%

LANSING, Mich. — As of Sept. 30, the State of Michigan Employees' Retirement Systems' total employee benefit assets increased 13.6% to $17.948 billion from $15.798 billion a year earlier. All assets are defined benefit.

Real estate managers: AEW; Copley; Sentinel; Trammell Crow Ventures; Zell/Merrill Lynch.

Venture capital and LBO managers: Accel Partners; Burr, Egan, Deleage; Battery Ventures; Berkshire Partners; Enterprise Management; Frontenac; Great Lakes Capital; Health Care Investment; InterVen Partners; KKR; Marquette; MBW; Menlo Ventures; MLGAL Partners; Morgan Holland Ventures; Newtek Limited Partners; Plant Resources Venture Fund; Regional Financial Enterprises; Robertson, Colman & Stephens; Sunwestern Investment Group; Warburg, Pincus; Wind Point Partners.

Key personnel overseeing the investment management of the fund are Robert A. Bowman, state treasurer, and Barry L. Stevens, director, and Gordon H. Linsday, deputy director, bureau of investments.

City of Milwaukee Employes' Retirement System

	($ millions)
Total assets	1,641
Defined benefit	1,641
Employer DB contributions	17
Benefit payments	55
Defined benefit asset mix:	
Stocks	42%
Fixed income	54%
Cash equivalents	2%
Real estate equity	2%

MILWAUKEE — As of Sept. 30, the

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City of Milwaukee Employes' Retirement System's total employee benefit assets increased 17.5% to $1.641 billion from $1.397 billion a year earlier. All assets are defined benefit.

Equity managers: Domestic — Alliance; Delaware; INVESCO; Northern Trust; and the Wisconsin Investment Board.

Fixed-income managers: Domestic — Criterion; First Wisconsin; Loomis, Sayles; and the Wisconsin Investment Board.

Real estate managers: JMB and Frank Russell.

The master custodian is First Wisconsin Trust; the investment consultant is SEI.

Key personnel overseeing the investment management of the fund are Robert Nehls, executive director, and Patrick Cronin, financial manager.

Minnesota Mining & Manufacturing Co.

	($ millions)
Total assets	3,490
Defined benefit	2,729
Defined contribution	761
401(k)	761
Employer DB contributions	0
Benefit payments	68
Employer DC contributions	26
Internally managed assets:	
Total DB	24
Defined benefit asset mix:	
Stocks	58.4%
Fixed income	31.8%
Real estate equity	6.9%
Other	2.9%
Defined contribution asset mix:	
Company stock	17.6%
Other stock	20.4%
GICs/BICs	55.5%
Other	6.5%

ST. PAUL, Minn. — As of Sept. 30, Minnesota Mining & Manufacturing Co.'s total employee benefit assets increased 29.1% to $3.49 billion from $2.703 billion a year earlier. Defined benefit assets increased 27.2% during the same period, to $2.729 billion from $2.146 billion. Defined contribution assets increased 36.7%, to $761 million from $557 million.

Equity managers: Domestic — Alliance; Ashland; Cursitor-Eaton; Franklin Portfolio; Grantham, Mayo, Van Otterloo; IDS; Mellon; Trinity; TSA; and ValueQuest.

International — Grantham, Mayo, Van Otterloo and Schroder.

Fixed-income managers: Domestic — Hoisington; Minnesota Mutual; PIMCO; and Sun Life.

Real estate managers: Citibank; Equitable; JMB; RCB Realty; RREEF; Schroder; and TCW.

LBO manager: Forstmann Little.

Venture capital managers: Oak Partners and Summitt Ventures.

Other managers: Allen Value Partners; HLM Partners; and Triumph.

The master trustee and global custodian is Boston Safe Deposit; the investment consultants are Lewis Bailey Associates and Harris Trust.

Key personnel overseeing the investment management of the fund are Janet L. Yeomans, director, and Deborah D. Weiss, manager.

Minnesota State Board of Investment

	($ millions)
Total assets	12,343
Defined benefit	11,890
Defined contribution	453
Internally managed assets:	
Total DB	5,123
Total DC	69
Defined benefit asset mix:	
Stocks	40.8%
Fixed income	51%
Cash equivalents	1.4%
Real estate equity	4.3%
Other	2.5%
Defined contribution asset mix:	
Other stock	50.9%
Fixed income	16.1%
Cash equivalents	21.9%
GICs/BICs	11.1%

ST. PAUL, Minn. — As of Sept. 30, Minnesota State Board of Investment's total employee benefit assets increased 20.9% to $12.343 billion from $10.207 billion a year earlier. Defined benefit assets increased 23.1% during the same period, to $11.89 billion from $9.657 billion. Defined contribution assets decreased 21.4% to $453 million from $550 million.

Equity managers: Domestic — Alliance; BMI; Concord Capital; Forstmann Leff; Franklin; IDA; Investment Advisers; Lieber; Rosenberg; Sasco; Waddell & Reed; and Wilshire.

Fixed-income managers: Domestic — Fidelity Management; Investment Advisers; Lehman; Lincoln Capital; Miller, Anderson; Morgan Stanley; and Western Asset.

Real estate managers: Aetna; AEW; Equitable; Heitman; Laventhol and Horwath; Prudential; RREEF; State Street; and TCW.

Venture capital managers: Allied; Brinson Partners; DSV Partners; G and K Partners; Golder, Thoma; Investment Advisers; KKR: Matrix; Northwest Venture Partners; T. Rowe Price; Smith Barney; and Stamps, Woodsum.

Oil and gas managers: Apache; Bank of America; Capital Management; Faegre and Benson; First Reserve; J.P. Morgan; Norwest Bank; and Sterling.

The master custodians are State Street Bank and First Trust St. Paul; the investment consultant is Richards & Tierney.

Key personnel overseeing the investment management of the fund are Howard J. Bicker, executive director; Beth Lehman, assistant executive director; Doug Gorence, manager-equity program; Roger Henry, manager-fixed income program.

The Oct. 1 special report will be a directory of real estate investment managers.

Public Employees' Retirement System of Mississippi

	($ millions)
Total assets	4,129
Defined benefit	4,129
Employer DB contributions	211
Benefit payments	205
Internally managed assets	100
Defined benefit asset mix:	
Stocks	30.7%
Fixed income	58.9%
Cash equivalents	10.4%

JACKSON, Miss. — As of Sept. 30, the Public Employees Retirement System of Mississippi's total employee benefit assets increased 23.8% to $4.129 billion from $3.336 billion a year earlier. All assets are defined benefit.

Equity managers: Domestic — Bankers Trust; Boston Co.; DFA; GeoCapital; INVESCO; Fayez Sarofim; and Sun Bank.

International — Bankers Trust and Hill Samuel.

Fixed-income managers: Domestic — Criterion; Dreyfus; Lehman Management; PIMCO; and Wells Fargo.

The master custodian is Trustmark National Bank; the global custodian is Boston Safe; SEI is consultant.

Key personnel overseeing the investment management of the fund are Eddie B. Vandiver, deputy director-investments; Ronald D. Logan, investment manager; and Sandra Carvajal, investment technician.

Public School Retirement System of Missouri

	($ millions)
Total assets*	5,328
Defined benefit	5,328
Employer DB contributions	155
Benefit payments	158

*as of June 30, 1989

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Defined benefit asset mix:	
Stocks	16%
Fixed income	56%
Cash equivalents	13%
Mortgage-backed securities	15%

JEFFERSON CITY, Mo. — As of June 30, the Public School Retirement System of Missouri's total employee benefit assets increased 18.4% to $5.328 billion from $4.5 billion nine months earlier. All assets are defined benefit.

Balanced managers: Boatmen's National; Loomis, Sayles; and United Missouri Investment.

The master custodian is Boatmen's National; Bank; the investment consultant is DeMarche Associates.

The key person overseeing the investment management of the fund's assets is David W. Mustoe, executive secretary.

Mobil Oil Corp.

	($ millions)
Total assets*	4,560
Defined benefit	2,425
Defined contribution	2,135
Other	2,135
Employer DB contributions	95
Benefit payments	170
Employer DC contributions	49
**as of Aug. 31, 1989*	

Hedging devices used:	
Bond options	
Fixed-income futures	
Defined benefit asset mix:	
Stocks	50%
Fixed income	36%
Cash equivalents	7%
Insurance	7%
Defined contribution asset mix:	
Company stock	49%
Other stock	6%
Fixed income	4%
Cash equivalents	8%
GICs/BICs	33%

NEW YORK — As of Aug. 31, Mobil Oil Corp.'s total employee benefit assets increased 17.5% to $4.56 billion from $3.88 billion 11 months earlier. Defined benefit assets increased 17.1% during the same period, to $2.425 billion from $2.07 billion. Defined contributions assets, which are in a thrift or savings/401(k) plan, increased 18%, to $2.135 billion from $1.81 billion.

Equity managers: Domestic — Alliance; Capital Guardian; Jennison; Miller, Anderson & Sherrerd; Fayez Sarofim; and Wells Fargo.

International — Capital Guardian.

Fixed-income managers: Domestic — Criterion; Henry Kaufman; Loomis, Sayles; Miller, Anderson & Sherrerd; J.P. Morgan; PIMCO; and State Street Research.

Cash managers: U.S. Trust Co. of New York (defined benefit) and Bankers Trust (defined contribution).

GIC and insurance manager: Metropolitan Life.

The master trustee for the defined benefit plan is U.S. Trust/New York, and for the defined contribution plan, Bankers Trust.

The key person overseeing the investment management of the fund is R.B. Hahnen, manager of corporate benefits-finance.

Monsanto Co.

	($ millions)
Total assets	4,300
Defined benefit	3,200
Defined contribution	1,100
Other	1,100
Employer DB contributions	0
Benefit payments	200
Employer DC contributions	34

Internally managed assets:	
Total DB	70
Hedging devices used:	
Stock options	
Bond options	
Stock index futures	
Fixed-income futures	
Defined benefit asset mix:	
Stocks	62%
Fixed income	21%
Cash equivalents	8%
Real estate equity	9%
Defined contribution asset mix:	
Company stock	40%
Other stock	7%
GICs/BICs	50%
Participant loans	3%

ST. LOUIS — As of Sept. 30, Monsanto Co.'s total employee benefit assets increased 7.8% to $4.3 billion from $3.99 billion a year earlier. Defined benefit assets increased 1.6% during the same period, to $3.2 billion from $3.15 billion. Defined contribution assets increased 31% to $1.1 billion from $840 million.

Equity managers: Domestic — Brown Capital; Delaware; Hagler, Mastrovita & Hewitt; Hotchkis and Wiley; Jennison; Lincoln Capital; Lord, Abbett; Morgan Grenfell; T. Rowe Price; Primecap; RCM; State Street Research; and Trinity.

International — Capital Guardian; Martin Currie; Rowe Price-Fleming.

Fixed-income managers: Domestic — Boatmen's National; W.R. Huff; Fischer, Francis, Trees & Watts; J.P. Morgan; Standish, Ayer & Wood; STW; and TCW.

Real estate managers: Equitable; Landauer; LaSalle; RREEF; and TCW.

Other managers: Analytic; Chancellor; and Security Pacific.

The master trustee and the global custodian is Northern Trust; the investment consultant is Frank Russell.

Key personnel overseeing the investment management of the fund are A.E. Wolfarth, assistant treasurer, and W.H. Crabbin, pension analyst.

Motorola Inc.

	($ millions)
Total assets	2,017
Defined benefit	566
Defined contribution	1,451
Other	1,451
Employer DB contributions	0
Benefit payments	9
Employer DC contributions	35

Defined benefit asset mix:	
Stocks	64%
Fixed income	36%
Defined contribution asset mix:	
Company stock	8%
Other stock	40%
Fixed income	52%

SCHAUMBURG, Ill. — As of Sept. 30, Motorola Inc.'s total employee benefit assets increased 24.7% to $2.017 billion from $1.618 billion a year earlier. Defined benefit assets increased 19.9% to $566 million from $472 million. Defined contribution assets increased 26.6% to $1.451 billion from $1.146 billion.

Equity managers: Domestic — Capital Guardian; Delaware; Harris Trust; Jennison; Lehman; Lincoln Capital; and Northern Trust.

International — Morgan Grenfell and Brinson Partners.

Fixed-income managers: Domestic — Brown Brothers Harriman; Scudder, Stevens; and Stein Roe.

The master trustees and global custodians are Harris Trust for the defined benefit plan and Northern Trust for the defined contribution plan.

William H.S. Preece Jr., assistant treasurer-investments, oversees the investment management of the fund.

N

National Electrical Contractors Association/International Brotherhood of Electrical Workers

	($ millions)
Total assets	3,675
Defined benefit	3,490
Defined contribution	185
Other	185
Employer DB contributions	170
Benefit payments	140
Employer DC contributions	24

Defined benefit asset mix:	
Stocks	36%
Fixed income	50%
Cash equivalents	6%
Real estate equity	8%
Defined contribution asset mix:	
Other stock	23%
Fixed income	45%
Cash equivalents	18%
Other	14%

WASHINGTON — As of Sept. 30, the National Electrical Contractors Association/International Brotherhood of Electrical Workers' total employee benefit assets increased 20.7% to $3.675 billion from $3.045 billion a year earlier. Defined benefit assets increased 20.1% during the same period, to $3.49 billion from $2.906 billion. Assets in its defined contribution plan increased 33.1%, to $185 million from $139 million.

The master trustee is Boston Safe Deposit; the investment consultant is Marco Consulting Croup.

Key personnel overseeing the investment management of the fund are John Grau and Jack Moore, trustees; and Roy Dickinson, executive assistant.

National Rural Electric Cooperative Association

	($ millions)
Total assets	2,304
Defined benefit	1,824
Defined contribution	480
401(k)	480

Internally managed assets:	
Total DB	882
Defined benefit asset mix:	
Stocks	53%
Fixed income	31%
Cash equivalents	16%
Defined contribution asset mix:	
Company stock	26%
Cash equivalents	27%
GICs/BICs	47%

WASHINGTON — As of Sept. 30, the National Rural Electric Cooperative Association's total employee benefit assets increased 16.2% to $2.304 billion from $1.982 billion a year earlier. Defined benefit assets increased 15% during the same period, to $1.824 billion from $1.586 billion. Defined contribution assets increased 21.2%, to $480 million from $396 million.

Equity managers: Domestic — Bankers Trust; Barrow, Hanley, Mewhinney & Strauss; C-S Capital; Capital Guardian; and Chesapeake.

International — Grantham, Mayo, Van Otterioo and J.P. Morgan.

Fixed-income manager: Domestic — Lincoln Income.

The master trustee and global custodian is State Street Bank and Trust.

Key personnel overseeing the investment management of the fund are Peter R. Morris, executive director-investments; Stuart E. Teach, senior equity portfolio manager; and Douglas G. Kern, senior fixed-income portfolio manager.

Navistar International Transportation Corp.

	($ millions)
Total assets	2,058
Defined benefit	2,031
Defined contribution	27
401(k)	27
Employer DB contributions	249
Benefit payments	234
Employer DC contributions	0.03

Internally managed assets:	
Total DB	176
Total DC	3
Hedging devices used:	
Fixed-income futures	
Defined benefit asset mix:	
Fixed income	81.9%
Cash equivalents	3.7%
GICs/BICs	0.3%
Annuities	2.1%
Mortgage-backed securities	12%
Defined contribution asset mix:	
Company stock	11%
Other stock	27%
GICs/BICs	62%

CHICAGO — As of Sept. 30, Navistar International Transportation Corp.'s total employee benefit assets increased 15.3% to $2.058 billion from $1.785 billion a year earlier. Defined benefit assets increased 14.6% during the same period, to $2.031 billion from $1.772 billion. Defined contribution assets increased 107.7% to $27 million from $13 million.

Equity managers: Domestic — Gabelli Asset Fund and Priform Investment.

Fixed-income manager: Domestic — Jennison.

The master trustee for the defined benefit plans was, as of Sept. 30, Bankers Trust; effective Nov. 1, it is Northern Trust. Continental Bank is trustee of the defined contribution plan.

Key personnel overseeing the investment management of the fund are T.M. Endsley, director-cash and investments, and E. Willis, pension analyst.

Public Employees Retirement System of Nevada

	($ millions)
Total assets	3,236
Defined benefit	3,236
Employer DB contributions	220
Benefit payments	108

Hedging devices used:	
Stock options	
Bond options	
Defined benefit asset mix:	
Stocks	43.4%
Fixed income	47.5%
Cash equivalents	0.6%
Real estate equity	6.2%
Mortgages	2.3%

CARSON CITY, Nev. — As of Sept. 30, the Public Employees Retirement System of Nevada's total employee benefit assets increased 20.7% to $3.236 billion from $2.682 billion a year earlier. All assets are defined benefit.

Equity managers: Domestic — Alliance; DFA; INVESCO; Loomis, Sayles; Wellington; and Wells Fargo.

International — Axe Core.

Fixed-income managers: Domestic — Criterion; Patterson Capital; Putnam; and State Street Research.

Real estate managers: Heitman; JMB; Karsten Realty; Lehndorff & Babson; J.P. Morgan; PMRealty; Prudential; and TCW.

Other managers: Balch, Hardy & Scheinmann; Bankers Trust; Columbine; Criterion; Golder, Thoma, Cressey; Menlo; and Summit Ventures.

The master custodian is Security Pacific National Bank; the investment consultant is William M. Mercer Meidinger Hansen.

Key personnel overseeing the investment management of the fund are Laura Wallace, investment officer, and Peggy Clark, investment analyst.

New Jersey Division of Investment

	($ millions)
Total assets	24,526

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Defined benefit	24,278
Defined contribution	248
Thrift or savings	248
Employer DB contributions	830
Benefit payments	420
Internally managed assets:	
Total DB	24,278
Total DC	248
Hedging devices used:	
Stock options	
Defined benefit asset mix:	
Stocks	48.7%
Fixed income	34.1%
Cash equivalents	4.1%
Mortgage-backed securities	13.1%
Defined contribution asset mix:	
Other stock	100%

TRENTON, N.J. — As of Sept. 30, the New Jersey Division of Investment's total employee benefit assets increased 22.1% to $24.526 billion from $20.092 billion a year earlier. Defined benefit assets increased 22% during the same period, to $24.278 billion from $19.892 billion. Defined contribution plan assets increased 24%, to $248 million from $200 million.

All assets are managed internally.

A group of 12 banks serves as custodian.

Key personnel overseeing the investment management of the fund are Roland M. Machold, director; Anthony Arcuni, deputy director; and Stephen Kornrumpf, assistant director.

New Mexico Educational Retirement Board

	($ millions)
Total assets	1,890
Defined benefit	1,890
Employer DB contributions	74
Benefit payments	122
Internally managed assets	1,890
Defined benefit asset mix:	
Stocks	5.6%
Fixed income	87.2%
Cash equivalents	7.2%

SANTA FE, N.M. — As of Sept. 30, the New Mexico Educational Retirement Board's total employee benefit assets increased 8% to $1.89 billion from $1.75 billion a year earlier. All assets are defined benefit.

All assets are managed internally, with Wellington Management serving as an adviser on stock and bond investments.

The master custodian is Bank of New York.

Key personnel overseeing the investment management of the fund are John E. Young, chief investment officer, and Sharon L. Scrogham, investment officer.

New Mexico Public Employees' Retirement Association

	($ millions)
Total assets	1,800
Defined benefit	1,800
Employer DB contributions	92
Benefit payments	84
Internally managed assets	6
Defined benefit asset mix:	
Stocks	37%
Fixed income	56%
Cash equivalents	6%
Mortgages	1%

SANTA FE, N.M. — As of Sept. 30, the New Mexico Public Employees' Retirement Association's total employee benefit assets increased 19% to $1.8 billion from $1.513 billion a year earlier. All assets are in defined benefit plans.

Equity managers: Domestic — Bankers Trust and Merus Capital.

Fixed-income managers: Domestic — Brown Brothers Harriman and Wentworth Hauser & Violich.

The custodian is Bank of New York; the investment consultant is Wilshire.

Richard Miller, chief operating officer, oversees the investment management of the fund.

New York City Retirement Systems

	($ millions)
Total assets	45,422
Defined benefit	45,422
Employer DB contributions	1,800
Benefit payments	3,400
Internally managed assets	1,675
Defined benefit asset mix:	
Stocks	36%
Fixed income	61%
Cash equivalents	3%

NEW YORK — As of Sept. 30, New York City Retirement Systems' total employee benefit assets increased 27.8% to $45.422 billion from $35.537 billion a year earlier.

The New York City comptroller's office oversees all investments for the New York City Employees', the Fire Department and the Police Department Retirement systems and oversees fixed-income investments for the Teachers' and the Board of Education systems. The Teachers' system oversees its GIC and equity investments and the equity investments of the Board of Education system.

All data in this profile other than the total asset figure, reflect the assets overseen by the comptroller's office.

Equity managers: Domestic — Bankers Trust; Bear Stearns; Fidelity; Investment Advisers; Lazard Freres; Oppenheimer; J & W Seligman; and TCW.

Fixed-income managers: Domestic — Bankers Trust; BEA; Bear Stearns; Chase Investors; Fiduciary Trust; Fischer, Francis, Trees & Watts; Investment Advisers; Kennedy Associates; Lehman Management; Lincoln Capital; Mellon Bond Associates; Miller, Anderson & Sherrerd; Mitchell Hutchins; PIMCO; T. Rowe Price; Putnam; Smith Barney; State Street Bank; RCM; Weiss, Peck & Greer; and Wells Fargo.

The master trustee is Citibank; the investment consultants are Callan; SEI; EAI; Rogers, Casey; and Buck.

Key personnel overseeing the investment management of the systems handled by the comptroller's office are Beverly L. Hamilton, third deputy comptroller; William Paolino, chief-bureau of asset management; and Candace Cox, division chief-investment strategy division.

New York Life Insurance Co.

	($ millions)
Total assets*	1,749
Defined benefit	1,525
Defined contribution	224
Employer DB contributions	0
Benefit payments	47
Employer DC contributions	10
**P&I estimate*	
Internally managed assets:	
Total DB	907
Total DC	224
Defined benefit asset mix:	
Stocks	21.9%
Fixed income	76%
Real estate equity	2.1%
Defined contribution asset mix:	
Other stock	16.3%
Fixed income	64.7%
GICs/BICs	14%
Other	5%

NEW YORK — *Pensions & Investments* estimates New York Life Insurance Co.'s employee benefit assets totaled $1.749 billion as of Sept. 30, of which $1.525 billion was defined benefit and $224 million was defined contribution. The estimates are based on data provided by the company as of Dec. 31, 1988.

Equity managers: Domestic — MacKay-Shields and Monitor Capital.

International — Gamma Advisers.

Fixed-income managers: Domestic — MacKay-Shields and Monitor Capital.

International — Gamma Advisers.

Real estate manager: Greystone.

Key personnel overseeing the investment management of the fund are Richard M. Kernan Jr., senior vice president; Lester L. Schoenberg, se-

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nior vice president; and George J. Trapp, vice president.

New York State & Local Retirement Systems

	($ millions)
Total assets	44,238
Defined benefit	44,238
Employer DB contributions	795
Benefit payments	1,628
Internally managed assets	36,919
Defined benefit asset mix:	
Stocks	49.4%
Fixed income	37.7%
Cash equivalents	3.7%
Real estate equity	1.8%
Mortgages	5.9%
Other	1.5%

ALBANY, N.Y. — As of Sept. 30, the New York State & Local Retirement Systems's total employee benefit assets increased 16.7% to $44.238 billion from $37.918 billion assets a year earlier. All assets are defined benefit.

Stock/bond managers: Alliance; Capital Guardian; Delaware; Lazard Freres; Lord, Abbett; Miller, Anderson & Sherrerd; Oppenheimer; J & W Seligman; Shearson; and Wells Fargo.

Real estate managers: CIGNA; Copley; Corporate Property Investors; Goldman, Sachs; JMB; LaSalle; O'Connor; RREEF; Schroder; and TCW.

LBO managers: Adler & Shaykin; Equitable; Forstmann Little; Freeman & Spogli; Gray Klein; and KKR.

Venture capital managers: Bridge Capital; Corporate Ventures; Crossroads; Montgomery Bridge; Alan Patricof; Peregrine Ventures; Rothschild Ventures; and U.S. Venture Partners.

The master trustee and global custodian is Chase Manhattan; the investment consultant is Callan.

Key personnel overseeing the investment management of the fund are John Hull, deputy comptroller, and John O'Connor and Robert Steves, assistant deputies.

New York State Teachers' Retirement System

	($ millions)
Total assets	28,130
Defined benefit	28,130
Employer DB contributions	926
Benefit payments	850
Internally managed assets	25,374
Defined benefit asset mix:	
Stocks	56.5%
Fixed income	33.1%
Cash equivalents	2.6%
Real estate equity	1.3%
Mortgages	6.1%
Other	0.4%

ALBANY, N.Y. — As of Sept. 30, the New York State Teachers' Retirement System's total employee benefit assets increased 23.5% to $28.13 billion from $22.779 billion a year earlier. All assets are defined benefit.

Equity managers: Domestic — Sanford C. Bernstein; Beutel, Goodman; Cowen; GAMCO; Glickenhaus; Lehman Management; Morgan Grenfell; Peregrine Capital; and RCM.

Fixed-income manager: Domestic — Sanford C. Bernstein.

Real estate managers: Aetna; Equitable; Goldman, Sachs; and Prudential.

The master custodian is Bankers Trust; the investment consultant is Buck.

Key personnel overseeing the investment management of the fund are Harold N. Langlitz, executive director; Edward J. Reno Jr., securities investment officer; and George M. Philip, chief real estate investment officer.

The consultants directory will be published Nov. 12.

North Carolina Department of State Treasurer

	($ millions)
Total assets	16,791
Defined benefit	16,791
Employer DB contributions*	438
Benefit payments*	465

as of Dec. 31, 1988

Internally managed assets	10,764
Hedging devices used:	
Stock options	
Defined benefit asset mix:	
Stocks	25%
Fixed income	61.6%
Cash equivalents	0.1%
Real estate equity	1.3%
Ginnie Maes	12%

RALEIGH, N.C. — As of Sept. 30, total employee benefit assets of the North Carolina Department of the State Treasurer, which oversees the North Carolina Retirement Systems, increased 21.7% to $16.791 billion from $13.8 billion a year earlier. All assets are in defined benefit plans.

Equity managers: Domestic — Alliance; Branch Bank; Central Carolina Bank; First Citizens Bank; First Union National; First Wachovia; NCNB; and Wellington Management.

International — Wellington.

Real estate managers: Aetna; CIGNA; First Wachovia; Goldman, Sachs; J.P. Morgan; NCNB; and Sentinel.

The master custodian is Bank of New York.

Key personnel overseeing the investment management of the fund are Harlan E. Boyles, state treasurer; C. Douglas Chappell, deputy treasurer and director-investment and banking division; and P. Keith Leonard, assistant state investment officer.

Northrop Corp.

	($ millions)
Total assets	3,623
Defined benefit	2,816
Defined contribution	807
Thrift or savings	28
401(k)	779
Employer DB contributions	0
Benefit payments	75
Employer DC contributions	38
Defined benefit asset mix:	
Stocks	69%
Fixed income	23%
Cash equivalents	8%
Defined contribution asset mix:	
Company stock	23%
Other stock	44%
Fixed income	10%
Cash equivalents	23%

LOS ANGELES — As of Sept. 30, Northrop Corp.'s total employee benefit assets increased 21.6% to $3.623 billion from $2.979 billion a year earlier. Defined benefit assets increased 25.5% during the same period, to $2.816 billion from $2.243 billion. Defined contribution assets increased 9.6%, to $807 million from $736 million.

Equity managers: Domestic — Capital Guardian; Forstmann-Leff; Jennison; Putnam; RCM; State Street Research; and TCW.

Fixed-income managers: Domestic — Fisher, Francis, Trees & Watts and Jennison.

The master trustee is Bankers Trust.

The key person overseeing the investment management of the fund is Richard B. Lohrer, vice president-trust investments.

NYNEX Corp.

	($ millions)
Total assets	16,062
Defined benefit	13,262
Defined contribution	2,800
Thrift or savings plan	2,800
Employer DB contributions	0
Benefit payments	392
Employer DC contributions	80
Internally managed assets:	
Total DB	1,412
Hedging devices used:	
Stock options	
Bond options	
Stock index futures	
Fixed-income futures	
Defined benefit asset mix:	
Stocks	60.4%
Fixed income	32.3%
Real estate equity	7.3%
Defined contribution asset mix:	
Company stock	32%
Other stock	15%

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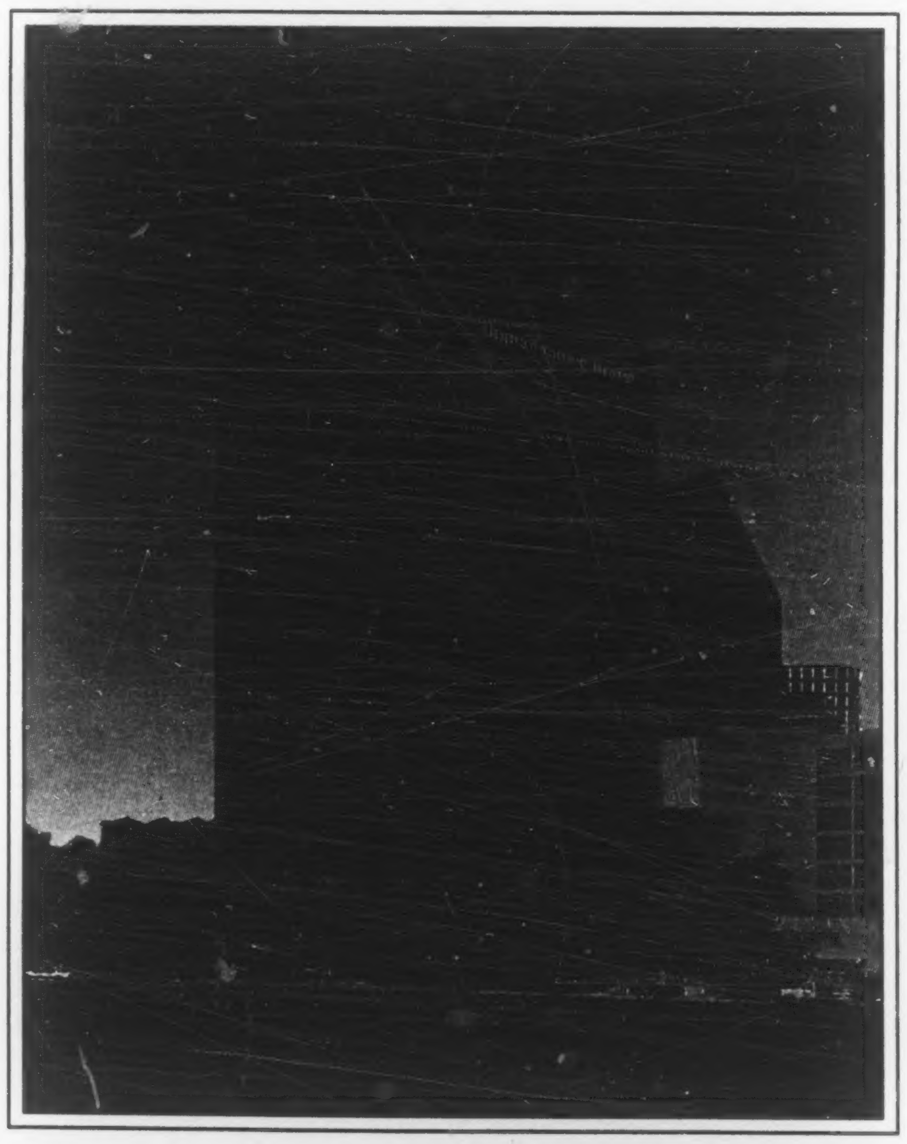

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Fixed income	10%
Cash equivalents	2%
GICs/BICs	26%
Other	15%

NEW YORK — As of Sept. 30, NYNEX Corp.'s total employee benefit assets increased 19.9% to $16.062 billion from $13.401 billion a year earlier. Defined benefit assets increased 17.8% during the same period, to $13.262 billion from $11.262 billion. Defined contribution assets rose 30.9%, to $2.8 billion from $2.139 billion.

Equity managers: Domestic — ANB Investment; Barrow, Hanley, Mewhinney & Strauss; Batterymarch; Daniel Breen; DFA; Fidelity Management; Franklin Portfolio; McCowan; Mitchell Hutchins; Trinity; TCW; and Wells Fargo.

International — ANB Investment; Capital Guardian; DFA; Mellon-Pictet; Morgan Stanley; State Street Bank; and Wells Fargo.

Fixed-income managers: Domestic — Boston Co.; Brown Brothers Harriman; Hancock; Jennison; Lincoln Capital; Massachusetts Financial; Mellon Bond Associates; Miller, Anderson & Sherrerd; Mitchell Hutchins; Prudential Capital; Standish Ayer & Wood; State Street Research; and Western Asset.

Real estate managers: AEW; Heitman; and McMahan.

The master trustees are Mellon Bank and Bankers Trust; the global custodian is Mellon Bank.

Key personnel overseeing the investment management of the fund are J.E. Clines, director; R. Wolf and J. Sutka, investment directors.

O

The Police and Firemen's Disability and Pension Fund of Ohio

	($ millions)
Total assets	3,070
Defined benefit	3,070
Employer DB contributions	150
Benefit payments	231
Internally managed assets	1,839
Hedging devices used:	
Stock options	
Defined benefit asset mix:	
Stocks	33.6%
Fixed income	54.8%
Cash equivalents	5.1%
Real estate equity	5.7%
Mortgages	0.4%
Venture capital	0.4%

COLUMBUS, Ohio — As of Sept. 30, The Police and Firemen's Disability and Pension Fund of Ohio's total employee benefit assets increased 17.4% to $3.07 billion from $2.614 billion a year earlier. All assets are defined benefit.

Equity managers: Domestic — Atalanta/Sosnoff; Axe Core; Bankers Trust; Duff & Phelps; Loomis, Sayles; Oppenheimer; Society Bank; and Value Line.

Real estate managers: Copley; MIG; Schroder; TA Associates; and Trident/Meyer.

Venture capital managers: Cardinal Financial and Primus.

The custodian is the state treasurer; the real estate investment consultant is Townsend.

Key personnel overseeing the investment management of the fund are Theodore G. Hall, investment manager, and Christopher Woods, fixed-income portfolio manager.

Ohio Public Employees' Retirement System

	($ millions)
Total assets	19,305
Defined benefit	19,305
Employer DB contributions	769
Benefit payments	933
Internally managed assets	18,659
Defined benefit asset mix:	
Stocks	21.1%
Fixed income	57.2%
Cash equivalents	18.2%
Real estate equity	3.4%
Venture capital	0.1%

COLUMBUS, Ohio — As of Sept. 30, the Ohio Public Employees' Retirement System's total employee benefit assets increased 17.7% to $19.305 billion from $16.408 billion a year earlier. All assets are defined benefit and, except for real estate, are managed internally.

Real estate managers: Bristol Group; CIGNA; Lowe Enterprises; NCNB; Rothschild; and Wells Fargo.

The custodian is the state treasurer.

Robert A. McLaughlin, investment officer, oversees the investment management of the fund.

School Employees Retirement System of Ohio

	($ millions)
Total assets	2,817
Defined benefit	2,817
Employer DB contributions	160
Benefit payments	238
Internally managed assets	1,770
Hedging devices used:	
Stock options	
Defined benefit asset mix:	
Stocks	39%
Fixed income	18.9%
Cash equivalents	6.9%
Real estate equity	10.7%
Mortgages	1.6%
Mortgage-backed securities	21.1%
Venture capital	1%
Convertible securities	0.8%

COLUMBUS, Ohio — As of Sept. 30, the School Employees Retirement System of Ohio's total employee benefit assets increased 16.5% to $2.817 billion from $2.418 billion a year earlier. All assets are defined benefit.

Equity manager: Domestic — Mellon Capital.

Real estate managers: Equitable; NCNB; and Prudential.

Venture capital managers: Cardinal Capital; Morganthaler; and Primus.

The custodian is the state treasurer; the investment consultants are Institutional Property Consultants and Ronald A. Karp.

Key personnel overseeing the investment management of the fund are Paul Kubinsky, director of investments, and Robert Cowman, assistant director of investment.

State Teachers Retirement System of Ohio

	($ millions)
Total assets	18,059
Defined benefit	18,059
Employer DB contributions	653
Benefit payments	926
Internally managed assets	17,650
Hedging devices used:	
Stock options	
Fixed-income futures	
Defined benefit asset mix:	
Stocks	30%
Fixed income	40.3%
Cash equivalents	12%
Real estate equity	11.3%
Mortgages	6.3%
Venture capital	0.1%

COLUMBUS, Ohio — As of Sept. 30, the State Teachers Retirement System of Ohio's total employee benefit assets increased 17.7%, to $18.059 billion from $15.348 billion a year earlier. All assets are defined benefit and internally managed, except for 20% — $409 million — of the $2.034 billion real estate allocation. The outside real estate managers are involved in specialized areas, such as timberland, and do not have full discretion.

Real estate managers: Copley; F.I.A.; Hancock Timber Resource; LaSalle; Travelers Realty; and Wellington Real Estate.

Investment consultants are Wellington Management and Karsten Realty.

Key personnel overseeing the investment management of the fund are C. James Grothaus, executive director; Stephen A. Mitchell, deputy executive director-investments; and Daniel M. Szente, assistant director-investments.

Book of Lists: Dec. 24.

Oklahoma Teachers' Retirement System

	($ millions)
Total assets	1,968
Defined benefit	1,861
Defined contribution	125
Other	125
Employer DB contributions	129
Benefit payments	251
Internally managed assets:	
Total DB	144
Defined benefit asset mix:	
Stocks	25%
Fixed income	68%
Cash equivalents	7%

OKLAHOMA CITY — As of Sept. 30, the Oklahoma Teachers' Retirement System's total employee benefit assets increased 9.3% to $1.968 billion from $1.8 billion a year earlier. Defined benefit assets increased 9.5% to $1.861 billion from $1.7 billion during the same period. Defined contribution assets rose 25% to $125 million from $100 million.

Equity managers: Domestic — Bank of Oklahoma; Capital Advisors; First Investment Management; Tom Johnson; Lazard Freres; and Liberty National Bank.

Fixed-income managers: Domestic — Bank of Oklahoma; First Investment Management; Tom Johnson; Liberty National; and Siebel.

The master custodian is First Interstate Bank.

Key personnel overseeing the investment management of the fund are Tom Beavers, executive secretary; Randy Kopsa, secretary/treasurer; and Jo Witt, director of investments.

Central Pension Fund of the International Union of Operating Engineers and Participating Employers

	($ millions)
Total assets	2,159
Defined benefit	2,159
Employer DB contributions	102
Benefit payments	81
Defined benefit asset mix:	
Stocks	32.4%
Fixed income	39.3%
Cash equivalents	15.3%
Real estate equity	1.6%
Mortgages	9.1%
GICs/BICs	2.3%

WASHINGTON — As of Sept. 30, the Central Pension Fund of the International Union of Operating Engineers and Participating Employers' total employee benefit assets increased 17.8% to $2.159 billion from $1.832 billion a year earlier. All assets are defined benefit.

Equity managers: Domestic — Sanford Bernstein; Concord Capital; GAMCO; Husic; Shearson Asset; Southeastern; and Wells Fargo.

Fixed-income managers: Domestic — Duff & Phelps; Loomis Sayles; STW; Wells Fargo; and Western.

Real estate manager: AEW.

The master trustee is State Street Bank; the investment consultant is Ennis, Knupp & Associates.

Key personnel overseeing the investment management of the fund are Jack E. Johnson, director of finance, and Robert A. Birch, assistant to the director of finance.

Oregon Public Employes Retirement System

	($ millions)
Total assets	11,178
Defined benefit	11,178
Employer DB contributions	480
Benefit payments	304
Internally managed assets	3,505
Hedging devices used:	
Stock options	
Stock index futures	
Defined benefit asset mix:	
Stocks	59.4%
Fixed income	23.3%
Cash equivalents	1%
Real estate equity	4.4%
Mortgages	4.8%
Other	7.1%

SALEM, Ore. — As of Sept. 30, the Oregon Public Employes Retirement System's total employee benefit assets increased 27% to $11.178 billion from $8.8 billion a year ago. All assets are defined benefit.

Equity managers: Domestic — Batterymarch; BEA; Columbia Management; Cutler; Franklin Asset; Froley, Revy; General American Investors; Harris Associates; Hotchkis and Wiley; Pinnacle Associates; Quest Advisory; RCM; Fayez Sarofim; George Springman; and Thompson-Rubenstein.

International — Cursitor-Eaton; Daiwa; Globe-Finlay; Matuschka-Moser; Nomura Capital; Phillipe Advisory; Rowe Price-Fleming.

Real estate manager: Alex Brown.

LBO manager: KKR.

The master custodian is First Interstate Bank; the global custodian is Chase; the investment consultants are Frank Russell and Wilshire.

Key personnel overseeing the investment management of the fund are Jim George, investment manager; Bill Unvertzagt, senior investment officer-fixed income; Jim Yasutome, senior investment officer-short-term investments; Terry Canby, senior investment officer-real estate and mortgages; and Jay Fewel, equity investment officer.

Owens-Illinois Inc.

	($ millions)
Total assets	2,644
Defined benefit	2,346
Defined contribution	298
401(k)	298
Employer DB contributions	7
Benefit payments	148
Hedging devices used:	
Stock index futures	
Fixed-income futures	
Defined benefit asset mix:	
Stocks	71.6%
Fixed income	12.5%
Cash equivalents	6.4%
Real estate equity	6.2%
Mortgages	2.4%
GICs/BICs	0.9%

TOLEDO, Ohio — As of Sept. 30, Owens-Illinois Inc.'s total employee benefit assets increased 15.7% to $2.644 billion from $2.286 billion a year earlier. Defined benefit assets increased 18.2% during the same period, to $2.346 billion from $1.985 billion. Defined contribution assets decreased 1%, to $298 million from $301 million.

Equity managers: Domestic — Barrow, Hanley, Mewhinney & Strauss; DFA; Emerging Growth; Franklin Portfolio; Harbor Capital; Jennison; Lazard Freres; Lieber; and Lincoln Capital.

International — Grantham, Mayo, Van Otterloo; Marsh & Cunningham; and Morgan Grenfell.

Fixed-income managers: Domestic — Jennison; Lazard Freres; PIMCO; State Street Bank; and Trustcorp.

International — Julius Baer.

Real estate managers: AEW; American Agricultural; Boston Co.; Prudential; RPI; RREEF; and Security Capital.

The master trustee is First Wachovia; the global custodian is Chase London; the investment consultant is Richards & Tierney.

Key personnel overseeing the investment management of the fund are Lee A. Wesselmann, senior vice president and chief financial officer; Ronald C. Boller, corporate vice president and director-benefit finance; and Constance L. Souders, manager-employee benefit plan asset administration.

P

Pacific Gas & Electric Co.

	($ millions)
Total assets	4,259
Defined benefit	3,056
Defined contribution	1,203
401(k)	1,203
Employer DB contributions	122
Benefit payments	121
Employer DC contributions	28
Hedging devices used:	
Stock index futures	
Fixed-income futures	
Defined benefit asset mix:	
Stocks	71%
Fixed income	14%
Cash equivalents	5%
Real estate equity	10%
Defined contribution asset mix:	
Company stock	90%
Other stock	7%
GICs/BICs	2%
Money market	1%

SAN FRANCISCO — As of Sept. 30, Pacific Gas & Electric Co.'s total employee benefit assets increased 29.1% to $4.259 billion from $3.299 billion as of June 30, 1988. Defined benefit assets increased 25.3% during the same period, to $3.056 billion from $2.439 billion. Defined contribution assets increased 39.9%, to $1.203 billion from $860 million.

Equity managers: Domestic — Bankers Trust; Barrow, Hanley, Mewhinney & Strauss; Dodge & Cox; Geewax Terker; Jundt/Capen; Loomis, Sayles; McCowan; Metropolitan Life; Miller, Anderson & Sherrerd; Olympic Capital; RCM; and Wells Fargo.

International — Arnhold & S. Bleichroeder; Capital Guardian; Oechsle; Posthorn; and Wells Fargo.

Fixed-income managers: Domestic — Sanford C. Bernstein; Fischer, Francis Trees & Watts; Metropolitan Life; Miller Anderson & Sherrerd; Prudential; and Wells Fargo.

Real estate managers: Corporate Property Investors; JMB; LaSalle; Metropolitan Life; Prudential; RREEF; and TCW.

The master trustee and global custodian is State Street Bank; the investment consultant is Frank Russell.

Key personnel overseeing the investment management of the fund are Gordon R. Smith, vice president-finance and rates; Jack F. Jenkins-Stork, treasurer; and Sunny Oberoi, director-investments and benefit finance.

Pacific Telesis Group

	($ millions)
Total assets*	11,443
Defined benefit	9,674
Defined contribution	1,769

**From Money Market Directory*

SAN FRANCISCO — According to the Money Market Directory, Pacific Telesis Group's employee benefit assets totaled $11.443 billion as of June 30. Defined benefit assets totaled $9.674 billion and defined contribution assets, $1.769 billion.

Richard McGahan, director-pension fund, oversees the investment management of the fund.

Pan American World Airways Inc.

	($ millions)
Total assets	1,621
Defined benefit	665
Defined contribution	956
Thrift or savings	908
ESOP	6
Other	42
Employer DB contributions	149
Benefit payments	107
Employer DC contributions	49
Hedging devices used:	
Stock index futures	
Fixed-income futures	
Defined benefit asset mix:	
Stocks	12%
Fixed income	45%
Cash equivalents	1%
Annuities	21%
Other	21%
Defined contribution asset mix:	
Other stock	61%
Fixed income	11%
Cash equivalents	28%

NEW YORK — As of Sept. 30, Pan American World Airways Inc.'s total employee benefit assets increased 30.7% to $1.621 billion from $1.24 billion a year earlier. Defined benefit assets increased 23.1% during the same period, to $665 million from $540 million. Assets in its defined contribution plan increased 36.6% to $956 million from $700 million.

Equity managers: Domestic — Ardsley Partners; Bankers Trust; Delaware; GAMCO; Lord, Abbett; Nicholas-

Applegate; Putnam; and Reich & Tang.

International — Alliance; Brinson Partners; Putnam; and WorldInvest.

Fixed-income managers: Domestic — Bankers Trust, Brinson Partners; Fisher, Francis, Trees & Watts; Mellon Bond; and Putnam.

International — Brinson Partners.

Other managers: CIGNA and John Hancock.

The master trustee is Bankers Trust; the investment consultant is Hamilton.

Key personnel overseeing the investment management of the fund are C.J. David Davies, senior vice president and treasurer; Carl F. Stillwell, systems director-benefits financing; and Noreen King, director-benefits financing.

J.C. Penney Co. Inc.

	($ millions)
Total assets	3,308
Defined benefit	1,345
Defined contribution	1,963
ESOP	106
Other	1,857
Employer DB contributions	0
Benefit payments	34
Employer DC contributions	53
Internally managed assets:	
Total DC	775
Hedging devices used:	
Stock index futures	
Fixed-income futures	
Defined benefit asset mix:	
Stocks	72%
Fixed income	14%
Cash equivalents	6%
Real estate equity	8%
Defined contribution asset mix:	
Company stock	59%
Other stock	2%
GICs/BICs	39%

DALLAS — As of Sept. 30, J.C. Penney Co. Inc.'s total employee benefit assets were $3.308 billion, of which $1.345 billion was defined benefit and $1.963 billion was defined contribution.

Equity managers: Domestic — Batterymarch; GeoCapital; Leiber; Miller, Anderson & Sherrerd; and RCM.

International — Fidelity and Grantham, Mayo, Van Otterloo.

Fixed-income managers: Domestic — W.R. Huff; MacKay-Shields; and Neuberger & Berman.

Real estate managers: RREEF and TCW.

Other managers: Matrix; MBW; Sprout; U.S. Venture Partners; Vista; Wells Fargo; and Woodside.

The master trustee and global custodian is State Street Bank; the investment consultant is Frank Russell.

Peggy Bernard, benefit plans investment manager, oversees the investment management of the fund.

Pennsylvania Public School Employes' Retirement System

	($ millions)
Total assets*	15,430
Defined benefit	15,430
Employer DB contributions	990
Benefit payments	875

**as of June 30, 1989*

Internally managed assets	858
Hedging devices used:	
Stock options	
Defined benefit asset mix:	
Stocks	37%
Fixed income	39%
Cash equivalents	16%
Real estate equity	5%
Mortgages	1%
Global	2%

HARRISBURG, Pa. — As of June 30, the Pennsylvania Public School Employes' Retirement System's total employee benefit assets increased 18.7% to $15.43 billion from $12.999 billion nine months earlier. All the assets are defined benefit.

Equity managers: Domestic — Ariston Capital; Bankers Trust; Birmingham Capital; Brandywine; Brown Capital; Cashman, Farrell; Columbus Circle; Comstock; Cutler; Crabbe-Huson; Delaware Investment; Dreman; Eagle; Fielding; Glenmede Trust; Gulf; Hudson; Income Research; Mackenzie Financial; Mellon Bank; Mellon Capital; Miller Anderson & Sherrerd; Mortgage Government Security; Newbold's; Oppenheimer; Pilgrim Baxter; Princeton Money Managers; Provident Capital; Security Pacific; and TCW.

Fixed-income managers: Domestic — Criterion; Fidelity Bank; Glenmede Trust; Loomis, Sayles; Mellon Bank; Miller, Anderson, Sherrerd; Morgan Stanley; PIMCO; Pittsburgh National Bank; and Putnam.

Global — Beutel Goodman; Interquant; PCM; and WorldInvest.

Real estate managers: Fidelity Bank and Jones Lang Wootton.

Venture capital managers: APA/Fostin; CEO Venture; CIGNA; Commonwealth Venture; Genesis Seed Fund; Loyalhanna; and NEPA.

Short-term managers: Delaware Investment and the Pennsylvania Treasury.

Balanced manager: Mellon Capital.

The master trustee is First Pennsylvania Bank; the global custodian is State Street Bank; the investment consultants are Evaluation Associates, MacFarlane Realty and Springhouse Associates.

Key personnel overseeing the investment management of the fund are Clay Mansfield, chief investment officer; John Lane, director of investments; and Mike Grubic, investment officer.

Pennsylvania State Employes' Retirement System

	($ millions)
Total assets	9,504
Defined benefit	9,504
Employer DB contributions	414
Benefit payments	574

Hedging devices used:	
Stock index futures	
Defined benefit asset mix:	
Stocks	47%
Fixed income	22%
Cash equivalents	15%
Real estate equity	8%
Mortgages	7%
Other	1%

HARRISBURG, Pa. — As of Sept. 30, the Pennsylvania State Employes' Retirement System's total employee benefit assets increased 19.3% to $9.504 billion from $7.967 billion a year earlier. All assets are defined benefit.

Equity managers: Domestic — Barrow, Hanley; Geewax, Terker; W.R. Huff; McGlinn; Miller, Anderson; Pilgrim, Baxter; Provident Investment; Sun Bank; Trinity; and Wells Fargo.

Fixed-income managers: Domestic — Delaware; Fidelity Bank; Mellon Bank; Miller, Anderson; and Payden & Rygel.

International — Miller, Anderson.

Tactical asset allocator: Wells Fargo.

Real estate managers: Aetna; Copley; Corporate Property Investors; F.I.A.; John Hancock; Heitman; JMB; Metric; Prudential; PSI; and Sentinel.

Venture capital managers: APA/Fostin; Butcher & Singer/Keystone; CEO Venture; Fostin Capital; Genesis Seed Fund; NEPA; Pittsburgh Seed Fund; PNC; TDH; and Zero Stage.

LBO managers: Brentwood; Maverick; Murphy & Fauver; and Russell Rea & Cappala.

Private placement manager: CIGNA.

The master custodian is the state treasurer; First Pennsylvania is the subcustodian; the investment consultants are Wilshire, Ronald A. Karp and Springhouse.

Key personnel overseeing the investment management of the fund are Kenneth G. Mertz II, chief investment officer, and Karen Nicely, assistant chief investment officer.

City of Philadelphia Municipal Pension Fund

	($ millions)
Total assets	1,754
Defined benefit	1,754
Employer DB contributions	162
Benefit payments	257

Hedging devices used:	
Stock options	
Defined benefit asset mix:	
Stocks	52.6%
Fixed income	34.2%
Cash equivalents	4.7%
Real estate equity	7.4%
Other	1.1%

PHILADEPHIA — As of Sept. 30 the City of Philadelphia Municipal Pension Fund's total employee benefit assets increased 11.2% to $1.754 billion from $1.578 billion a year earlier. All of the assets are defined benefit.

Equity managers: Domestic — Ariel; Bankers Trust; Columbus Circle; Cooke & Bieler; Delaware; Miller, Anderson & Sherrerd; NCM Capital; Nelson, Benson & Zellmer; Parametric; Peregrine; and Trinity.

International — Dimensional Fund Advisors; Parametric; SBC; and World-Invest.

Fixed-income managers: Domestic — Criterion, 1838 Investment Advisors; Lincoln Capital; Miller, Anderson; PIMCO; and TCW.

Real estate managers: CIGNA; Copley; Dover; Grubb & Ellis; JMB; MIG Realty; and Public Storage.

Venture capital managers: CIGNA; Genesis Seed Fund; Hall; and Meridian.

First Pennsylvania is master custodian and global custodian; the consultants are Frank Russell Trust and MIG Realty.

Key personnel overseeing the investment management of the fund are Peter G. Crescitelli, executive director; and Margaret Samkavitz, investment analyst.

Philip Morris Inc.

	($ millions)
Total assets	7,470
Defined benefit	5,160
Defined contribution	2,310
Profit-sharing	1,200
401(k)	1,110
Employer DB contributions	0
Benefit payments	200
Employer DC contributions	132

Defined benefit asset mix:	
Stocks	70%
Fixed income	28%
Real estate equity	2%
Defined contribution asset mix:	
Company stock	24%
Other stock	31%
Cash equivalents	7%
GICs/BICs	38%

NEW YORK — As of Sept. 30, Philip Morris Inc.'s total employee benefit assets increased 66% to $7.47 billion from $4.5 billion a year earlier because of its acquisition of Kraft Inc. When the previous year's figures are combined, the increase drops to 22.3%. Defined benefit assets increased 15% as of Sept. 30, to $5.16 billion from the combined $4.482 billion. Defined contribution assets increased 42%, to $2.31 billion from a combined $1.626 billion.

Equity managers: Domestic — Alliance Capital; Ardsley Partners; Ariel; Sanford C. Bernstein; Chancellor; Chase Manhattan; Delphi Capital; Eagle; First Wisconsin; Glickenhaus; Neuberger Berman; Rosenberg Capital; Trinity; and Wellington.

International — Mellon-Pictet; Morgan Grenfell; and State Street Bank.

Fixed-income managers: Domestic — Fischer Francis; Loomis Sayles; PIMCO; and Reams.

Real estate managers: JMB Realty and TCW Realty.

Other managers: Blackstone Capital and Hancock Venture.

The master trustee and global custodian is State Street Bank.

Key personnel overseeing the investment management of the fund are B.J. Miller, vice president-benefit investments; Mary Lee Calimano, director-equities and administration; and Mark Werner, manager-capital markets.

Phillips Petroleum Co.

	($ millions)
Total assets	2,250
Defined benefit	450
Defined contribution	1,800
ESOP	500
Other	1,300
Employer DB contributions	0
Benefit payments	10
Employer DC contributions	25

Defined benefit asset mix:	
Stocks	35%
Fixed income	53%
Cash equivalents	2%
Real estate equity	8%
Mortgages	2%
Defined contribution asset mix:	
Company stock	65%
Fixed income	4%
Cash equivalents	1%
GICs/BICs	30%

BARTLESVILLE, Okla. — As of Sept. 30, Phillips Petroleum Co.'s total employee benefit assets increased 32.4% to $2.25 billion from $1.7 billion a year earlier. Defined benefit assets increased 50% during the same period, to $450 million from $300 million. Assets in its defined contribution plans increased 28.6% to $1.8 billion from $1.4 billion.

Equity managers: Domestic — Barrow, Hanley; Travelers; and Wells Fargo.

Fixed-income managers: Domestic — Equitable; J.P. Morgan; Prudential and Travelers.

Real estate managers: Citibank; JMB; and Victor Palmieri.

Other manager: Forstmann Little.

The master trustee is Citibank.

The key person overseeing the investment management of the fund is R.W. Holsapple, manager-foreign exchange and investment.

Plumbers, National Headquarters

	($ millions)
Total assets*	1,615
Defined benefit	1,615
Employer DB contributions	58

**P&I estimate*

WASHINGTON — As of Sept. 30, the Plumbers, National Headquarters employee benefit assets totaled an estimated $1.615 billion. The figures were estimated based on data from Money Market Directory.

The key person overseeing the investment management of the fund is Marsha Pugh, administrator.

PPG Industries Inc.

	($ millions)
Total assets	1,880
Defined benefit	1,026
Defined contribution	854
Employer DB contributions	1
Benefit payments	76
Employer DC contributions	36

Hedging devices used:	
Stock index futures	
Fixed-income futures	
Defined benefit asset mix:	
Stocks	51%
Fixed income	47%
Cash equivalents	1%
GICs/BICs	1%
Defined contribution asset mix:	
Company stock	51%
Other stock	3%
Fixed income	1%
GICs/BICs	45%

PITTSBURGH — As of Sept. 30, PPG Industries Inc.'s total employee benefit assets were $1.88 billion. Defined benefit assets were $1.026 billion, and defined contribution plan assets were $854 million.

Equity managers: Domestic — Chancellor; Federated Securities; Fidelity Management Trust; Loomis Sayles; Mellon Capital; Neuberger & Berman; Pinnacle; and Reich & Tang.

International — Mellon Capital; Morgan Stanley; and Schroder Capital.

Fixed-income manager: Domestic

We are pleased to announce that

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has joined our firm as

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Brundage, Story and Rose
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JANUARY 2, 1990

— J.P. Morgan.

The master trustee is Mellon Bank; the global custodian is Mellon-Pictet; the investment consultant is Frank Russell.

The key person overseeing the investment management of the fund is C.H. Elmer, manager-pension investment administration.

Board of Pensions of the Presbyterian Church (U.S.A.)

	($ millions)
Total assets	2,400
Defined benefit	2,400
Employer DB contributions	95
Benefit payments	105
Internally managed assets:	
Total DB	200
Defined benefit asset mix:	
Stocks	45%
Fixed income	30%
Cash equivalents	10%
Real estate equity	10%
GICs/BICs	5%

PHILADELPHIA — As of Sept. 30, Board of Pensions of the Presbyterian Church (U.S.A.)'s total employee benefit assets increased 20% to $2.4 billon from $2 billion a year earlier. All assets are in a combined defined benefit/defined contribution plan.

Equity managers: Domestic — GeoCapital; Kirr, Marbach; Morgan Grenfell; J.P Morgan; Quest; Templeton; Trusco; and Wells Fargo.

International — Capital Guardian; Marvin & Palmer; PCM; and Templeton.

Fixed-income managers: Domestic — Corestates; Loomis, Sayles; NCM; PIMCO; Reams; and Standish, Ayers & Wood.

International — Loomis, Sayles.

Real estate managers: CIGNA; Copley; Equitable; JMB; LaSalle; O'Connor; and TCW.

Venture capital: UNC.

The master trustee is Mellon Bank; the global subcustodian is Mellon Pictet; the investment consultants are Callan and Debatin.

Key personnel overseeing the investment management of the fund are Wm. Irwin Arbuckle II, vice president-investments and treasurer, and Judith D. Freyer, assistant treasurer.

Procter & Gamble Co.

	($ millions)
Total assets	4,970
Defined benefit	170
Defined contribution	4,800
Profit-sharing	3,770
Thrift or savings	30
ESOP	1,000
Employer DC contributions	200
Internally managed assets:	
Total DC	3,500
Defined benefit asset mix:	
Stocks	23%
Fixed income	77%
Defined contribution asset mix:	
Company stock	73%
Cash equivalents	6%
GICs/BICs	21%

CINCINNATI — As of Sept. 30, Procter & Gamble Co.'s total employee benefit assets increased 60.2% to $4.97 billion from $3.102 billion as of June 30, 1988. Defined benefit assets increased 14% during the same period, to $170 million from $149 million. Defined contribution assets increased 62.5%, to $4.8 billion from $2.953 billion.

Equity managers: Domestic — Aetna; Ariel; Babson; Bankers Trust; Fidelity Investments; IDS; Northern Trust; and Wells Fargo.

Fixed-income managers: Domestic — Bankers Trust; IDS; J.P. Morgan; Northern Trust; T. Rowe Price; and Wells Fargo.

The master trustees are Northern Trust, Bankers Trust and Bank of New York.

The investment consultant is SEI.

Key personnel overseeing the investment management of the fund are John R. Smith, manager-pension plans; Joe R. Lawhead, assistant treasurer; McKay F. Christensen, treasury analyst.

Prudential Insurance Co. of America

	($ millions)
Total assets	6,042
Defined benefit	4,691
Defined contribution	1,351
Thrift or savings	1,244
401(k)	107
Employer DB contributions	0
Benefit payments	117
Employer DC contributions	29
Internally managed assets:	
Total DB	4,691
Total DC	1,351
Defined benefit asset mix:	
Stocks	52%
Fixed income	30
Cash equivalents	8%
Real estate equity	10%
Defined contribution asset mix:	
Other stock	13%
Fixed income	87%

NEWARK, N.J. — As of Sept. 30, the Prudential Insurance Co. of America's total employee benefit assets increased 14.5% to $6.042 billion from $5.276 billion a year earlier. Defined benefit assets increased 14.9% during the same period, to $4.691 billion from $4.084 billion. Total defined contribution plan assets increased 13.3%, to $1.351 billion from $1.192 billion. All assets are managed by Prudential affiliates.

The investment consultant is Prudential Diversified Investment Strategies.

Key personnel overseeing the investment management of the fund are James H. Scott, managing director, and Michael A. Lenarcic, director-portfolio management.

Pensions & Investments will publish a special report on CFO and other financial executive salaries May 14.

R

Raytheon Co.

	($ millions)
Total assets	3,050
Defined benefit	2,288
Defined contribution	762
Profit-sharing	7
Thrift or savings	15
401(k)	672
ESOP	68
Employer DB contributions	10
Benefit payments	75
Employer DC contributions	50
Defined benefit asset mix:	
Stocks	72.8%
Fixed income	24.6%
Cash equivalents	2%
Real estate equity	0.6%
Defined contribution asset mix:	
Company stock	11%
Other stock	21%
GICs/BICs	68%

LEXINGTON, Mass. — As of Sept. 30, Raytheon Co.'s total employee benefit assets increased 25.5% to $3.05 billion from $2.43 billion a year earlier. Defined benefit assets increased 20.4% during the same period, to $2.288 billion from $1.9 billion. Defined contribution assets increased 43.8%, to $762 million from $530 million.

Equity managers: Domestic — Bankers Trust; Batterymarch; Boston Co.; Dewey Square; Fidelity; INVESCO; Loomis, Sayles; Paribas; Matrix; Rosenberg; State Street Research; and Sun Bank.

Fixed-income managers: Domestic — Richmond Capital and Loomis Sayles.

The master trustee is Boston Safe.

Key personnel overseeing the in-

Warner Communications Inc.

has merged with

Time Warner Inc.

formerly

Time Incorporated

The undersigned acted as financial advisor to Warner Communications Inc.

LAZARD FRÈRES & CO.

January 11, 1990

vestment management of the fund are Herbert Deitcher, senior vice president/treasurer; W. Bruce Livingston, manager-employee benefits financing; and Steven S. DeMeo, senior employee benefits financing specialist.

Rhode Island Retirement System

	($ millions)
Total assets	2,300
Defined benefit	2,300
Employer DB contributions	115
Benefit payments	110
Internally managed assets	230
Hedging devices used:	
Stock options	
Bond options	
Stock index futures	
Fixed-income futures	
Short selling	
Defined benefit asset mix:	
Stocks	48%
Fixed income	30%
Cash equivalents	17%
Real estate equity	2%
International equities	3%

PROVIDENCE, R.I. — As of Sept. 30, the Rhode Island Retirement System's total employee benefit assets increased 20.4% to $2.3 billion from $1.911 billion a year earlier. All assets are defined benefit.

Equity managers: Domestic — Bankers Trust; Boston Co.; H.T. Investors; Provident; and Van Liew Capital.

International — Alliance.

Fixed-income managers: Domestic — Brown Brothers and Fidelity Management.

Real estate managers: Aetna; Heitman; and Lehndorff & Babson.

Venture capital manager: Crossroads Capital.

State Street Bank is the master and global custodian; the investment consultant is Wilshire.

Key personnel overseeing the investment management of the fund are Jerome F. Williams, deputy general treasurer for finance, and Stephen F. Iafrate, fiscal manager/administrative officer.

RJR Nabisco Inc.

	($ millions)
Total assets	4,100
Defined benefit	2,700
Defined contribution	1,400
401(k)	1,400
Defined benefit asset mix:	
Stock	57%
Fixed income	24%
Real estate equity	6%
Cash equivalents	13%

NEW YORK — As of Sept. 30, RJR Nabisco Inc.'s total employee benefit assets increased 21.1% to $4.1 billion from $3.387 billion a year earlier. Defined benefit assets increased 8.4% during the same period, to $2.7 billion from $2.491 billion, while defined contribution assets, all in a 401(k) plan, increased 56.3% to $1.4 billion from $896 million.

The key person overseeing the investment management of the fund is John W. MacMurray, senior director-pension administration.

Rockwell International Corp.

	($ millions)
Total assets*	9,124
Defined benefit	6,624
Defined contribution	2,500

**P&I estimate*

PITTSBURGH — As of Sept. 30, Rockwell International Corp.'s total employee benefit assets were $9.124 billion, according to *Pensions & Investments'* estimate. Defined benefit assets are estimated at $6.624 billion, and defined contribution assets, $2.5 billion.

Key personnel involved in overseeing the investment management of the fund are Lee H. Cramer, vice president and treasurer, and Susan Leathers, director pension assets management.

The investment advisers directory will be published May 21.

S

San Francisco City & County Employees' Retirement System

	($ millions)
Total assets*	3,916
Defined benefit	3,792
Defined contribution	125
Employer DB contributions	217
Benefit payments	188
Employer DC contributions	0

**as of June 30, 1989*

Internally managed assets:	
Total DB	1,328
Defined benefit asset mix:	
Stocks	26%
Fixed income	39%
Cash equivalents	11%
Real estate equity	3%
Mortgages	10%
International stocks	6%
International bonds	5%

SAN FRANCISCO — As of June, 30, San Francisco City & County Employees' Retirement System's total employee benefit assets increased 17.9% to $3.916 billion from $3.322 billion a year earlier. Defined benefit assets increased 17.4% during the same period, to $3.792 billion from $3.229 billion. Defined contribution assets increased 34%, to $125 million from $93 million.

Equity managers: Domestic — Axe Core; Hanson; McCullough, Andrews & Capiello; Nicholas Applegate; RCM; George B. Springman; and Trinity.

International — Capital Guardian; Morgan Grenfell; and Oechsle.

Fixed-income managers: Domestic — Axe-Houghton; Caywood-Christian; MacKay-Shields; Miller, Anderson, Sherrerd; MacKay-Shields; Scudder, Stevens & Clark; and TCW.

International — Brinson Partners; Warburg.

Real estate manager: Coldwell Banker.

Venture capital managers: Bigler Partners & Crossroads.

The custodian is Bankers Trust; the investment consultant is Callan.

Key personnel overseeing the investment management of the fund are Clare M. Murphy, general manager, and Kenneth L. Shaffer, chief investment officer.

Sears, Roebuck & Co.

	($ millions)
Total assets	8,101
Defined benefit	2,974
Defined contribution	5,127
Other	5,127
Internally managed assets:	
Total DB	2,666
Total DC	5,019
Defined benefit asset mix:	
Stocks	60.6%
Fixed income	26%
Cash equivalents	1.1%
Real estate equity	3%
Other	9.3%
Defined contribution asset mix:	
Company stock	43.1%
Other stock	24.7%
Fixed income	14.1%
Cash equivalents	16.8%
International	1.3%

CHICAGO — As of Sept. 30, Sears, Roebuck & Co.'s total employee benefit assets increased 12.9% to $8.101 billion from $7.176 billion a year earlier. Defined benefit assets increased 11.5% during the same period, to $2.974 billion from $2.667 billion. Defined contribution assets increased 13.7% to $5.127 billion from $4.509 billion.

Equity managers: Domestic — Rosenberg Institutional Equity.

International — Capital Guardian and State Street Bank.

Real estate managers: Aldrich, Eastman & Waltch and Coldwell Banker.

The master trustee and global custodian is Continental Bank.

Key personnel overseeing the investment management of the fund, all with Sears Investment Management Co., are David V. Dootson, president; Michael Norton, vice president-fixed income; James M. Smith, vice president-venture capital and emerging growth; and David H. Williams, vice president-equities.

Shell Oil Co.

	($ millions)
Total assets	7,840
Defined benefit	3,700
Defined contribution	4,140
Thrift or savings	3,533
401(k)	403
ESOP	204
Employer DB contributions	74
Benefit payments	177
Employer DC contributions	93
Internally managed assets:	
Total DB	1,115
Total DC	3,118
Defined benefit asset mix:	
Stocks	51.3%
Fixed income	29.9%
Cash equivalents	4.3%
Real estate	12.5%
GICs/BICs	2%
Defined contribution asset mix:	
Company stock	3.9%
Other stock	7.8%
GICs/BICs	88.3%

HOUSTON — As of Sept. 30, Shell Oil Co.'s total employee benefit assets increased 17.3% to $7.84 billion from $6.686 billion a year earlier. Defined benefit assets increased 19% during the same period, to $3.7 billion from $3.108 billion. Defined contribution assets increased 15.7%, to $4.14 billion from $3.578 billion.

Equity managers: Domestic — Sanford Bernstein; Criterion; Equitable; Independence; Investment Research; Kemper; Mellon; Fayez Sarofim; and Wells Fargo.

International — AIG.

Fixed-income managers: Domestic — BEA; Sanford C. Bernstein; Chase; Duff & Phelps; and Texas Commerce.

Real estate managers: Aetna; First Chicago; Cabot, Cabot; Equitable; Hancock; Heitman; JMB; Prudential; and RREEF.

Other managers: Aetna; Allstate; Bank One; Confederation Life; Equitable; Hancock; Hartford; Metropolitan Life; Mutual Life of New York; New York Life; Pacific Financial; Prudential; The Principal; State Mutual; and Travelers.

The master trustee for the defined benefit plan is Bankers Trust; trustees for the defined contribution plan are NCNB-Texas and Texas Commerce; the global custodian is Boston Safe; the investment consultant is Frank Russell.

Key personnel overseeing the investment management of the fund are L.S. Chaikind, administrator, and J.B. Kloehr, secretary.

South Carolina Retirement System

	($ millions)
Total assets*	7,072
Defined benefit	7,072
Employer DB contributions	266
Benefit payments	295

**as of June 30, 1989*

Internally managed assets:	
Total DB	7,072
Defined benefit asset mix:	
Fixed income	91%
Cash equivalents	9%

COLUMBIA, S.C. — As of Sept. 30, South Carolina Retirement System's total employee benefit assets increased 17.7% to $7.072 billion from $6.009 billion. All assets are in defined benefit plans.

Jamison, Eaton & Wood Co. is the investment management consultant.

Key personnel overseeing the investment management of the fund are Grady L. Patterson Jr., state treasurer; Sandy A. Huey, deputy state treasurer; and Chuck Sanders, senior assistant state treasurer.

The Southern Co.

	($millions)
Total assets	3,100
Defined benefit	2,400
Defined contribution	700
401(k)	700
Employer DB contributions	25
Benefit payments	55
Employer DC contributions	50
Hedging devices used:	
Stock options	
Bond options	
Stock index futures	
Fixed-income futures	

ATLANTA — As of Sept. 30, The Southern Co.'s total employee benefit assets increased 19.2% to $3.1 billion from $2.6 billion a year earlier. Defined benefit assets increased 20% during the same period, to $2.4 billion from $2 billion. Assets in its defined contribution plan increased 16.7%, to $700 million from $600 million.

Equity managers: Domestic — AmSouth Bank; INVESCO; Jundt/Capen; Lieber; Miller, Anderson & Sherrerd; Northern Capital; Spears, Benzak; and Strong/Corneliuson.

Fixed-income managers: Domestic — Discount Corp. Advisors; First Wachovia; and Trusco.

The master trustee is Banker's Trust.

The key person overseeing the investment management of the fund is David Prince, assistant treasurer.

Annuity Board of the Southern Baptist Convention

	($ millions)
Total assets	2,559
Defined benefit	822
Defined contribution	1,737
Other	1,737
Employer DB contributions	0
Benefit payments	30
Internally managed assets:	
Total DB	39
Defined benefit asset mix:	
Stocks	51%
Fixed income	35%
Real estate equity	2%
Mortgages	2%
GICs/BICs	10%
Defined contribution asset mix:	
Other stock	18%
Fixed income	13%
Cash equivalents	5%
GICs/BICs	64%

DALLAS — As of Sept. 30, the Annuity Board of the Southern Baptist Convention's total employee benefit assets increased 15.1% to $2.559 billion from $2.223 billion a year earlier. Defined benefit assets increased 13.1% during the same period, to $822 million from $727 million. Defined contribution assets increased 16.3%, to $1.737 billion from $1.493 billion.

Equity managers: Domestic — Barrow, Hanley; Capital Guardian; Eagle; Gamco; Ganucheau, Stupfel & Brumley; JMC; Luther King; Lazard Freres; Loomis, Sayles; Munder; Provident; RCM; Sasco; Scudder, Stevens; and Sirach/Flinn, Elvins.

International — Hill Samuel and SBC.

Fixed-income managers: Domestic — Sanford C. Bernstein; Loomis, Sayles; MacKay-Shields; J.P. Morgan; STW; and Western Asset.

Options overwriter manager: Loomis, Sayles.

The master trustee is Northern Trust; the investment consultant is SEI.

Key personnel overseeing the investment management of the fund are John R. Jones and Dave L. Borders, vice presidents.

Southern California Edison

	($ millions)
Total assets	2,380
Defined benefit	1,580
Defined contribution	800
401(k)	560
ESOP	240
Employer DB contributions	45
Benefit payments	56
Hedging devices used:	
Stock options	
Stock index futures	
Fixed-income futures	
Defined benefit asset mix:	
Stocks	64%
Fixed income	22%
Cash equivalents	1%
Real estate equity	4%
GICs/BICs	5%
Other	4%
Defined contribution asset mix:	
Company stock	76%
Other stock	5%
Fixed income	2%
Cash equivalents	3%
GICs/BICs	10%
Balanced fund	4%

ROSEMEAD, Calif — As of Sept. 30, Southern California Edison's total employee benefit assets increased 13.1% to $2.38 billion from $2.104 billion a year earlier. Defined benefit assets increased 21.7% during the same period, to $1.58 billion from $1.298 billion. Defined contribution assets decreased about 1%, to $800 million from $806 million.

Equity managers: Domestic — Dimensional Fund; Dodge & Cox; Hotchkis & Wiley; Jundt/Capen; Mellon; Pacific Financial; RCM; Rosenberg Institutional; and Sit Investment.

International — Acadian; Batterymarch; TCW; and Warburg.

Fixed-income managers: Domestic — NCM; PIMCO and RCM.

Real estate managers: Equitable; JMB; LaSalle; Pacific Mutual; and TCW.

Options Manager: MCQ Inc.

Overwriting Manager: Bankers Trust.

Cash manager: Payden & Rygel.

The master trustee is Security Pacific; the global custodian is Mitsubishi; the investment consultant is Frank Russell.

Key personnel overseeing the investment management of the fund are W. James Scilacci, manager-pension investments, and Rick Yamamoto, supervisor-pension investments.

Southern California UFCW & Food Employers Pension Trust Fund

	($ millions)
Total assets	2,133
Defined benefit	2,133
Employer DB contributions	124
Benefit payments	117
Internally managed assets	46
Hedging devices used:	
Fixed-income futures	
Defined benefit asset mix:	
Stocks	36.9%
Fixed income	42.5%
Cash equivalents	4%
Real estate equity	3.9%
Mortgages	0.1%
GICs/BICs	12.6%

CYPRESS, Calif. — As of Sept. 30, the Southern California United Food & Commercial Workers & Food Employers Pension Trust Fund's total employee benefit assets increased 45.7% to $2.133 billion from $1.464 billion a year earlier. All of the assets are defined benefit.

Equity managers: Domestic — Batterymarch; Cramblit & Carney; Lazard Freres; Oppenheimer; and Wells Fargo.

Fixed-income managers: Domestic — PIMCO; Putnam; TCW; and Weiss, Peck & Greer.

Real estate managers: LaSalle; Lehndorff & Babson; McMorgan; Prudential; and Smith Barney Birtcher.

Other managers: Morley and Patterson Capital.

The master trustee is First Interstate Bank; the investment consultants are R.V. Kuhns and Institutional Property Consultants.

Key personnel overseeing the investment management of the fund are P. Colleen Thompson, administrator, and Joel F. Meltz, controller.

Southern New England Telephone Co.

	($ millions)
Total assets	1,912
Defined benefit	1,640
Defined contribution	272
Other	272
Employer DB contributions	0
Benefit payments	61
Employer DC contributions	10
Hedging devices used:	
Stock options	
Stock index futures	
Defined benefit asset mix:	
Stocks	60%
Fixed income	31%
Cash equivalents	1%
Real estate equity	6%
Other	2%
Defined contribution asset mix:	
Company stock	30%

Other stock	6%
GICs/BICs	64%

NEW HAVEN, Conn.— As of Sept. 30, Southern New England Telephone Co.'s total employee benefit assets increased 17.7% to $1.912 billion from $1.625 billion a year earlier. Defined benefit assets increased 17.1% during the same period, to $1.64 billion from $1.4 billion. Defined contribution assets increased 20.9% to $272 million from $225 million.

Equity managers: Domestic — ANB; Analytic; Barrow, Hanley; Connecticut National Bank; Moran; Wellington; and Wells Fargo.

International — Mercator; Posthorn; and Wells Fargo.

Fixed-income managers: Domestic — Dreyfus; Equitable; Putnam; STW; and Wells Fargo.

Real estate managers: CIGNA; JMB; LaSalle; Schroder Real Estate; and Sentinel.

Other managers: Columbine Venture Funds; Hellman & Friedman Capital; Recovery Equity Partners; Triumph Capital; and Rimco Oil & Gas.

The master trustees are Boston Safe Deposit for the defined benefit plans and Bankers Trust for the defined contribution plans.

The global custodian is Boston Safe Deposit.

Key personnel overseeing the investment management of the fund are John J. Miller, assistant secretary and assistant treasurer, and Katherine R. Griswold, staff specialist.

Southwestern Bell Corp.

	($ millions)
Total assets	8,334
Defined benefit	7,166
Defined contribution	1,168
Thrift or savings	1,168
Employer DB contributions	0
Benefit payments	275
Employer DC contributions	43
Defined benefit asset mix:	
Stocks	58.2%
Fixed income	29.1%
Cash equivalents	0.7%
Real estate equity	10.5%
Other	1.5%
Defined contribution asset mix:	
Company stock	39.6%
Other stock	21%
Fixed income	3.5%
Cash equivalents	2.5%
GICs/BICs	33.4%

ST. LOUIS — As of Sept. 30, Southwestern Bell Corp.'s total employee benefit assets increased 19.7% to $8.334 billion from $6.961 billion a year earlier. Defined benefit assets increased 17.7% during the same period, to $7.166 billion from $6.086 billion. Assets in its defined contribution plan increased 33.5%, to $1.168 billion from $875 million.

Equity managers: Domestic — Dynastat; Franklin; GeoCapital; Jennison; NFJ Investment Group; Nicholas Applegate; Pilgrim Baxter; Rosenberg Institutional; Sasco Capital; Southeastern Asset; and Wells Fargo.

International — IDS; Nomura; and Wells Fargo.

Fixed-income managers: Domestic — Jennison and Mississippi Valley.

Real estate managers: Boston Counsel; Heitman; and McMahan.

Other managers: Bigler and Brinson Partners.

The master trustee is NCNB Texas; the global custodian is Chase; the investment consultant is Buck.

Key personnel overseeing the investment management of the fund are M.A. Devine, director-pension investments, and C. Weaver, director-pension fund.

State Farm Insurance Cos.

	($ millions)
Total assets*	3,084
Defined benefit	2,526
Defined contribution	558

**P&I estimate*

BLOOMINGTON, Ill. — As of Sept. 30, State Farm Insurance Cos.' total employee benefit assets were $3.084 billion, *Pensions & Investments* estimates.

T

Teachers Insurance and Annuity Association — College Retirement Equities Fund

	($ millions)
Total assets	81,000
Defined contribution	81,000
Employer DC contributions	3,600
Internally managed assets	81,000
Defined contribution asset mix:	
Other stock	44%
Fixed income	25%
Cash equivalents	4%
Other	27%

NEW YORK — As of Sept. 30, the Teachers Insurance Annuity Association — College Retirement Equities Fund's total employee benefit assets increased 20.6% to $81 billion from $67.141 billion a year earlier. All assets are in defined contribution plans.

TIAA-CREF, the nation's largest pension plan, is managed internally. Investments include $26 billion in indexed stocks, $4 billion in international stocks; $3 billion in real estate equity; $18 billion in mortgages; $1.7 billion in mortgage-backed securities; and $53 million in foreign bonds.

Other investments include $700 million in leveraged buy-outs and $10 billion in private placements.

The master custodians for TIAA are Citibank and Morgan Guaranty. The master custodians for CREF are Bankers Trust and Morgan Guaranty; global custodians are Bankers and Chase Manhattan.

Overseeing TIAA investments are J. Daniel Lee Jr., executive vice president, TIAA investments; David B. Bullett, senior vice president, TIAA investments; and John A. Sommers, senior vice president, TIAA mortgage and real estate.

Key personnel overseeing CREF investments are James S. Martin, executive vice president, CREF investments; C. Oscar Morong Jr., senior vice president and director, CREF domestic active investments; and Virgil H. Cumming, vice president and director, CREF international investments.

Teamsters, Central States, Southeast & Southwest Areas Pension Fund

	($ millions)
Total assets	9,849
Defined benefit	9,849
Employer DB contributions	744
Benefit payments	898
Internally managed assets:	
Total DB	117
Defined benefit asset mix:	
Stocks	30.7%
Fixed income	64.1%
Cash equivalents	5.1%
Real estate equity	0.1%

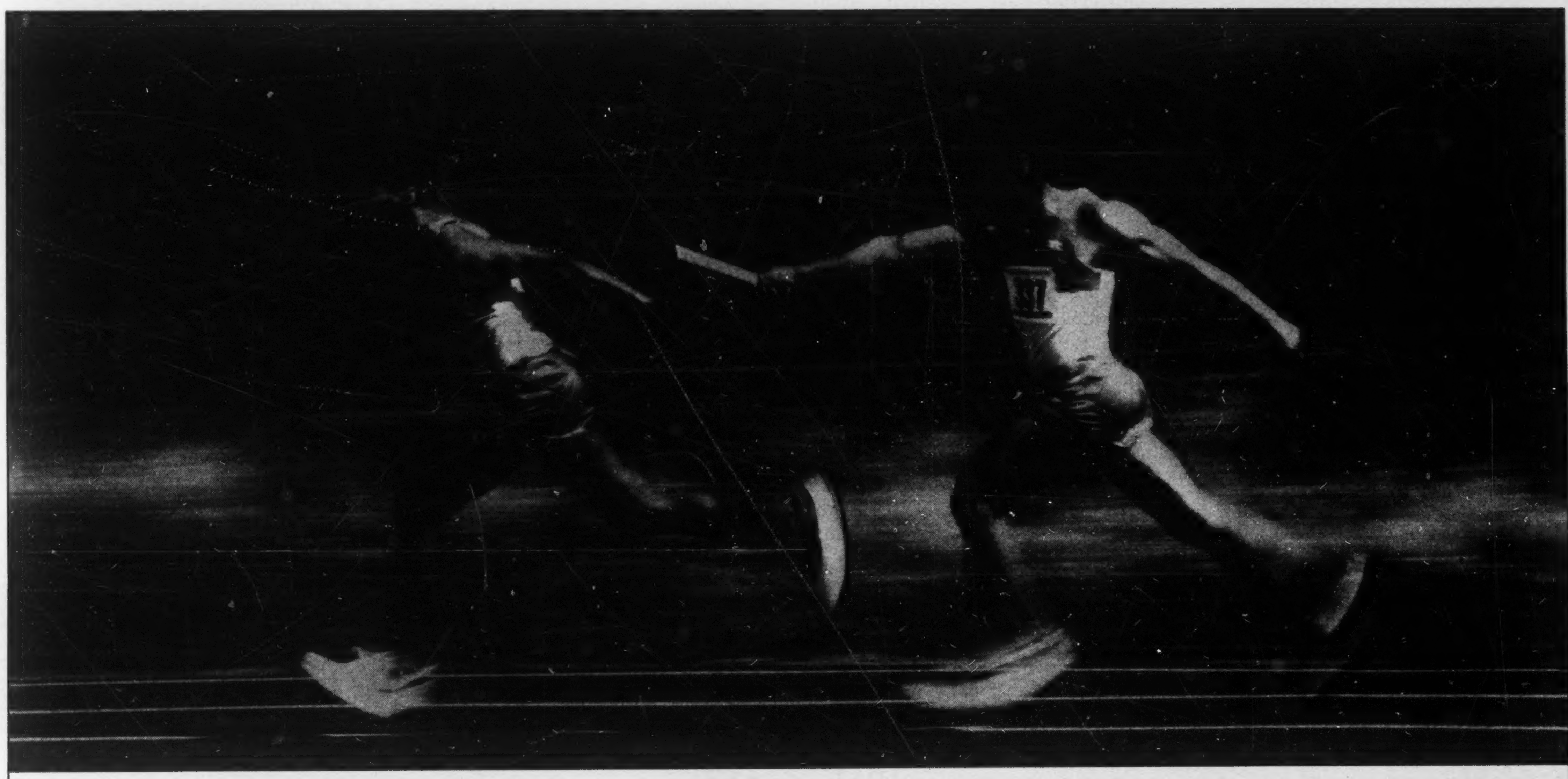
CHICAGO — As of Sept. 30, the Teamsters, Central States, Southeast & Southwest Areas Pension Fund's total assets increased 16.3% to $9.849 billion from $8.469 billion a year earlier. All assets are defined benefit.

Equity managers: BEA; Equitable; INVESCO; Lynch & Mayer; Mellon Capital; Putnam; and Wells Fargo.

Fixed-income managers: Domestic — Bankers Trust; Fiduciary Trust; Lincoln; MacKay-Shields; Mellon Bank; Miller, Anderson & Sherrerd; and T. Rowe Price.

Real-estate managers: Eastdil and Karsten.

Short-term cash equivalents: Mellon Bank.



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TWENTIETH CENTURY INVESTORS

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Twentieth Century Securities provides Institutional Marketing and Service for Twentieth Century Investors.

PIA

The custodian is Mellon Bank.

Morgan Stanley Group Inc. as named fiduciary oversees the investment management of the fund.

Western Conference of Teamsters' Pension Trust

	($ millions)
Total assets*	9,084
Defined benefit	9,084

**P&I estimate*

SEATTLE — As of Sept. 30, the Western Conference of Teamsters' Pension Trust's employee benefit assets were $9.084 billion, *Pensions & Investments* estimates based on information from Money Market Directory.

Teledyne Inc.

	($ millions)
Total assets*	1,668
Defined benefit	1,668

**Money Market Directory*

LOS ANGELES — Teledyne Inc.'s total employee benefit assets were $1.668 billion as of June 30, according to the Money Market Directory. All assets are defined benefit. Figures for the previous year were not available.

Tenneco Inc.

	($ millions)
Total assets	2,877
Defined benefit	2,074
Defined contribution	803
401(k)	803
Internally managed assets:	
Total DC	750
Defined benefit asset mix:	
Stocks	63%
Fixed income	34%
Cash equivalents	3%
Defined contribution asset mix:	
Company stock	17%
Other stock	4%
Fixed income	2%
Cash equivalents	73%
Other	4%

HOUSTON — As of Sept. 30, Tenneco Inc.'s total employee benefit assets increased 13.1% to $2.877 billion from $2.542 billion a year earlier. Defined benefit assets increased 20.8% during the same period, to $2.074 billion from $1.717 billion. Defined contribution assets decreased 2.7%, to $803 million from $825 million.

Equity managers: Domestic — Sanford Bernstein; Capstone; Delaware; Dimensional Fund; IDS; and Fayez Sarofim.

Fixed-income managers: Domestic — Capstone; Fischer, Francis; J.P. Morgan; State Street Research; and STW.

Other manager: Bridge Capital.

The master trustee is Bankers Trust; the investment consultant is Callan.

Key personnel overseeing the investment management of the fund are Kenneth W. Reese, chairman-investment committee, and R.A. Robinson, executive director-investments.

Tennessee Consolidated Retirement System

	($ millions)
Total assets	8,075
Defined benefit	8,075
Employer DB contributions	160
Internally managed assets	8,075
Defined benefit asset mix:	
Stocks	34%
Fixed income	50.2%
Cash equivalents	6%
International	9.8%

NASHVILLE, Tenn. — As of Sept. 30, the Tennessee Consolidated Retirement System's total employee benefit assets increased 21.6% to $8.075 billion from $6.643 billion. All assets are defined benefit and managed internally.

Chase Manhattan is the master and global custodian. Beginning in 1990, the investment consultant is Callan.

Key personnel overseeing the investment management of the fund are Charles Webb, chief investment officer; Marshall Cox, fixed-income portfolio manager; and Jeremy Conlin, equity portfolio manager.

Tennessee Valley Authority Retirement System

	($ millions)
Total assets	3,090
Defined benefit	2,894
Defined contribution	196
Thrift or savings	130
401(k)	66
Employer DB contributions	80
Benefit payments	120
Defined benefit asset mix:	
Stocks	53%
Fixed income	40%
Cash equivalents	5%
GICs/BICs	2%
Defined contribution asset mix:	
Other stock	9%
GICs/BICs	91%

KNOXVILLE, Tenn. — As of Sept. 30, the TVA Retirement System's total employee benefit assets increased 23.6% to $3.09 billion from $2.5 billion a year earlier. Defined benefit assets increased 20.6% during the same period, to $2.894 billion from $2.4 billion. Defined contribution assets increased 96%, to $196 million from $100 million.

Equity managers: Domestic — Disciplined Investment; Geewax Terker; Mellon Capital; Morgan Grenfell; North Carolina Mutual; Rosenberg Institutional; and Sun Bank.

Fixed-income managers: Domestic — Duff & Phelps; W.R. Huff; Lord, Abbett; Mellon Capital; and PIMCO.

The master trustee is Mellon Bank; the investment consultant is Wilshire.

Key personnel overseeing the investment management of the fund are Kathy J. White, executive secretary, and Larry Edwards, chairman of the board.

Texaco Inc.

	($ millions)
Total assets	3,200
Defined benefit	1,300
Defined contribution	1,900
ESOP	500
Other	1,400
Employer DB contributions	51
Benefit payments	165
Internally managed assets:	
Total DB	50
Defined benefit asset mix:	
Stocks	46%
Fixed income	36%
Cash equivalents	11%
Real estate equity	7%

WHITE PLAINS, N.Y. — As of Sept. 30, Texaco Inc.'s total employee benefit assets were $3.2 billion. Defined benefit assets were $1.3 billion and defined contribution assets were $1.9 billion.

Equity managers: Domestic — Alliance; Harris Associates; INVESCO; McCowan Associates; Mellon Capital; J.P. Morgan; and Trinity.

Fixed-income managers: Domestic — WR Lazard and J.P. Morgan.

Real estate managers: Aetna; Copley; Equitable; J.P. Morgan; Prudential; and Travelers.

The master trustee is Chase Manhattan; the investment consultant is Wilshire.

The key person overseeing the investment management of the fund is Shelby Faber, manager-pensions and benefits.

Texas County and District Retirement System

	($ millions)
Total assets	2,000
Defined contribution	2,000
Defined contribution asset mix:	
Fixed income	100%

AUSTIN, Texas — As of Sept. 30, the Texas County and District Retirement System's total employee benefit assets increased 11.8% to $2 billion from $1.789 billion a year earlier. All assets are in a defined contribution plan.

The master custodian is Texas Commerce.

Key personnel overseeing the investment management of the fund are J. Robert Brown, director; Terry Horton, assistant director; and Ronald Schultz, investment consultant.

Employees Retirement System of Texas

	($ millions)
Total assets	5,969
Defined benefit	5,969
Employer DB contributions	174
Benefit payments	189
Internally managed assets	5,969
Defined benefit asset mix:	
Stocks	27%
Fixed income	70%
Cash equivalents	3%

AUSTIN, Texas — As of Sept. 30, the Employees Retirement System of Texas total employee benefit assets increased 16.9% to $5.969 billion from $5.108 billion a year earlier.

Equity adviser: Domestic — INVESCO.

Fixed-income adviser: Domestic — Duff & Phelps.

The master trustee is NCNB-Texas.

Key personnel overseeing the investment management of the fund are Clayton T. Garrison, executive director; Nancy. G. Goerdel, deputy director for investments; and Stephen P. Arnold, assistant investment officer.

Texas Municipal Retirement System

	($ millions)
Total assets	2,200
Defined contribution	2,200
Internally managed assets	2,200
Defined contribution asset mix:	
Fixed income	100%

AUSTIN, Texas — As of Sept. 30, the Texas Municipal Retirement System's total employee benefit assets increased 22.2% to $2.2 billion from $1.8 billion a year earlier. All assets are in a defined contribution plan.

The master custodian is First City, Austin; the investment adviser is Duff & Phelps.

Key personnel overseeing the investment management of the fund are Jimmie L. Mormon, director, and Preston G. Craig, investment officer.

Teacher Retirement System of Texas

	($ millions)
Total assets	23,500
Defined benefit	23,500
Employer DB contributions	700
Benefit payments	900
Internally managed assets:	
Total DB	23,500
Defined benefit asset mix:	
Stocks	30.6%
Fixed income	57.4%
Cash equivalents	3%
Mortgages	9%

AUSTIN, Texas — As of Sept. 30, the Teacher Retirement System of Texas' total employee benefit assets increased 20.9% to $23.5 billion from $19.439 billion a year earlier. All assets are defined benefit.

Key personnel overseeing the investment management of the fund are Joe Perrone, chief investment officer; George Reagan, investment officer-equities; Jack Cooper, investment officer-fixed income; and Gene Richeman, investment officer-real estate.

Textron Inc.

	($ millions)
Total assets*	3,121
Defined benefit	2,319
Defined contribution	802
Profit-sharing	164
ESOP	638
Employer DB contributions	20
Benefit payments	144

**as of Oct. 31, 1989*

Internally managed assets:	
Total DB	2,100
Defined benefit asset mix:	
Stocks	27%
Fixed income	43%
Cash equivalents	12%
Real estate equity	8%
GICs/BICs	3%
Private placements	7%
Defined contribution asset mix:	

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Fixed income	42%
Cash equivalents	1%
GICs/BICs	4%
Other	53%

PROVIDENCE, R.I. — As of Oct. 31, Textron Inc.'s total employee benefit assets increased 11.8% to $3.121 billion from $2.792 billion a year earlier. Defined benefit assets increased 9.1% during the same period, to $2.319 billion from $2.126 billion. Defined contribution assets increased 20.4%, to $802 million from $666 million.

Equity managers: Domestic — Sanford C. Bernstein; Delaware Investment; Trinity; and Wellington.

Fixed-income manager: Domestic — AMCORE Bank.

Real estate manager: Prudential.

The master trustee is Bankers Trust.

The key person overseeing the investment management of the fund is Richard A. Watson, vice president.

Trans World Airlines Inc.

	($ millions)
Total assets	2,470
Defined benefit	1,055
Defined contribution	1,415
401(k)	161
ESOP	9
Other	1,245
Employer DB contributions	41
Benefit payments	31
Employer DC contributions	27
Internally managed assets:	
Total DB	690
Defined benefit asset mix:	
Stocks	41%
Fixed income	17%
Cash equivalents	31%
Real estate equity	2%
GICs/BICs	9%
Defined contribution asset mix:	
Other stock	64%
Fixed income	1%
Cash equivalents	5%
GICs/BICs	21%
Real estate	9%

KANSAS CITY, Mo. — As of Sept. 30, Trans World Airlines Inc.'s total employee benefit assets increased 17.4% to $2.47 billion from $2.104 billion a year earlier. Defined benefit assets increased 19.6% during the same period, to $1.055 billion from $882 million. Defined contribution assets increased 15.8%, to $1.415 billion from $1.222 billion.

Equity managers: Domestic — Estabrook; Federated Investment; Fidelity Management; Fort Hill; Frontier; GAMCO, McGlinn; Mellon Capital; J.P. Morgan; Shields; State Street Research; Twentieth Century; and Wells Fargo.

International — SBC International; State Street Bank; and WorldInvest.

Fixed-income managers: Domestic — Estabrook; Fidelity Management; Fort Hill; Frontier; GAMCO; McGlinn; J.P. Morgan; Shields; State Street Research; and Wells Fargo.

Real estate managers: Aetna; Citibank; Coldwell Banker; Lomas & Nettleton; J.P. Morgan; NCNB; State Street Bank; and TCW.

GIC managers: Boston Co.; Morley; and PRIMCO.

The master trustee and global custodian is Boston Safe.

Key person overseeing the investment management of the fund is Gary D. Dilley, director-pension finance.

The Travelers Insurance Cos.

	($ millions)
Total assets	2,075
Defined benefit	1,554
Defined contribution	521
Thrift or savings	324
401(k)	133
Other	64
Employer DB contributions	51
Benefit payments	45
Employer DC contributions	9
Internally managed assets:	
Total DB	1,554
Total DC	521
Hedging devices used:	
Stock options	
Bond options	
Stock index futures	
Fixed-income futures	
Defined benefit asset mix:	
Stocks	41%
Fixed income	10%
Cash equivalents	5%
Real estate equity	5%
GICs/BICs	27%
Other	12%
Defined contribution asset mix:	
Company stock	37%
Other stock	7%
Fixed income	56%

HARTFORD, Conn. — As of Sept. 30, The Travelers Insurance Cos.' total employee benefit assets had increased 13.4% to $2.075 billion from $1.83 billion a year earlier. Defined benefit assets increased 12.9% during the same period, to $1.554 billion from $1.376 billion. Assets in its defined contribution plans increased 14.8%, to $521 million from $454 million. All assets are managed internally or by subsidiaries of Travelers.

The master trustee is Connecticut National Bank; the global custodian is Morgan Guaranty.

Key personnel overseeing the investment management of the fund are Richard Shima, executive vice president, Travelers Insurance Co.; Thomas O. Thorsen, executive vice president, Travelers Insurance Co.; and David M. Dunford, president, TIMCO.

TRW Inc.

	($ millions)
Total assets	3,096
Defined benefit	2,103
Defined contribution	993
401(k)	993
Employer DB contributions	28
Benefit payments	90
Employer DC contributions	33
Internally managed assets:	
Total DB	129
Defined benefit asset mix:	
Stocks	58%
Fixed income	27%
Cash equivalents	14%
Venture capital	1%
Defined contribution asset mix:	
Company stock	47%
Other stock	20%
GICs/BICs	33%

CLEVELAND — As of Sept. 30, TRW Inc.'s total employee benefit assets increased to $3.096 billion. Defined benefit assets increased to $2.103 billion; defined contribution assets increased to $993 million.

Equity managers: Domestic — Alliance; Baring America; Sanford Bernstein; Boston Safe Deposit; Campbell Advisors; Eagle; Investment Counselors of Maryland; and Westwood Management.

International — Baring International and Ivory & Sime.

Fixed-income managers: Domestic — Hoisington; MacKay-Shields; and PIMCO.

International — J.P. Morgan and Morgan Grenfell.

Other manager: Boston Safe Deposit.

The master trustee and global custodian is Boston Safe Deposit.

Robert M. Hamje, president-TRW Investment Management Co., oversees the investment management of the fund.

U

Union Carbide Corp.

	($ millions)
Total assets	2,693
Defined benefit	2,095
Defined contribution	598
Employer DB contributions	57
Benefit payments	86
Employer DC contributions	20
Internally managed assets:	
Total DB	2,059
Defined benefit asset mix:	

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Stocks	24%
Fixed income	65%
Real estate equity	3%
Mortgages	3%
Annuities	2%
Private placements	3%
Defined contribution asset mix:	
Company stock	10%
Other stock	5%
GICs/BICs	85%

DANBURY, Conn.— As of Sept. 30, Union Carbide Corp.'s total employee benefit assets stood at $2.693 billion. No comparison with previous year data is possible because the company did not include its defined contribution assets in that total. Defined benefit assets increased 22.4% to $2.095 billion from $1.711 billion a year earlier.

Benefit Capital Management Corp., a subsidiary of Union Carbide, handles the management of the Union Carbide pension fund's defined benefit plan assets.

Equity manager: Domestic — BEA (defined contribution).

GIC manager: Met Life (defined contribution).

The master trustee is Manufacturers Hanover Trust.

Key personnel overseeing the investment management of the fund, all Benefit Capital executives, are Michael F. Hoben, president; Robert Burstein, senior vice president; Lawrence R. Fuller, senior vice president; and Harold T. Dalcher, senior vice president.

Unisys Corp.

	($ millions)
Total assets*	5,022
Defined benefit	3,206
Defined contribution	1,816
401(k)	1,186
Employer DB contributions	52
Benefit payments	178
Employer DC contributions	47

**as of Aug. 31, 1989*

Defined benefit asset mix:	
Stocks	64.3%
Fixed income	13.1%
Cash equivalents	2.9%
Real estate equity	7.4%
GICs/BICs	5%
International stock	5.4%
Venture capital	1.9%
Defined contribution asset mix:	
Company stock	6.2%
Other stock	13.4%
Fixed income	7.9%
Cash equivalents	4.8%
GICs/BICs	67.7%

BLUE BELL, Pa. — As of Aug. 31, Unisys Corp.'s total employee benefit assets increased 17% to $5.022 billion from $4.281 billion a year earlier. Defined benefit assets increased 20% during the same period, to $3.206 billion from $2.667 billion. Assets in its defined contribution plan increased 12.5% to $1.816 billion from $1.614 billion.

Equity managers: Domestic — Fred Alger; BEA; Chase; Concord Capital; Geewax Terker; Independence Investment; Lazard Freres; Mellon Equity; MTH Asset Management; Nicholas Applegate; NWQ Investment; Pacific Financial Research; PRIMECAP; Rosenberg; Thomson, Horstmann & Bryant; Travelers Investment Management; United Capital; and Wells Fargo.

International — Mercator; Travelers; and Wellington.

Fixed-income managers: Domestic — Harris Trust; M.D. Sass; and Security Capital.

Real estate managers: AMLI Southwest; Chemical Bank; Connecticut General Real Estate; Coldwell; GE Investment Realty; JMB; LaSalle; and RCB.

Venture capital managers: Abbott Capital; Blackstone Capital; Carl Marks Levered Equities; Norton Partners; T. Rowe Price; Recovery Equity Investors; Robertson Colman; and Ventures Trident.

GIC managers: Aetna; Hancock; Metropolitan Insurance; and Travelers.

401 (k) managers: Allstate; Brinson Partners; Connecticut General; Confederation Life; Executive Life; First National Bank of Chicago; Manufacturers Hanover; Metropolitan Life; Mutual Benefit Life; Northern Trust; Pacific Mutual Life; The Principal; Provident National; Prudential Insurance; Rogers, Casey; Seafirst Bank; State Mutual Life; Sun Life; Union Central Life; Travelers; and Wells Fargo.

The master trustees are Harris Trust for the defined benefit plan and Northern Trust for the 401(k) plan; the global custodian is Harris Trust/Mitsubishi; the investment consultant is Rogers, Casey.

Key personnel overseeing the investment management of the fund are David A. White, vice president-capital management; and Charles A. Service, director-U.S. programs.

United Airlines Inc.

	($ millions)
Total assets	3,700
Defined benefit	2,000
Defined contribution	1,700
Thrift or savings	1,200
401(k)	500
Employer DB contributions	70
Benefit payments	72
Employer DC contributions	60

Hedging devices used:
Fixed-income futures

Defined benefit asset mix:	
Stocks	48%
Fixed income	42%
Cash equivalents	3%
Real estate equity	7%
Defined contribution asset mix:	
Other stock	35%
Fixed income	65%

CHICAGO — As of Sept. 30, United Airlines Inc.'s total employee benefit assets increased 12.1% to $3.7 billion from $3.3 billion a year earlier. Defined benefit assets increased 11.1% during the same period, to $2 billion from $1.8 billion. Defined contribution assets increased 13.3%, to $1.7 billion from $1.5 billion.

Equity managers: Domestic — Cambiar; First Manhattan; Hotchkis and Wiley; Lincoln Capital; McCowan; Sit; Weiss, Peck & Greer; and Wells Fargo.

International — HD International and Hill Samuel.

Fixed-income managers: Domestic — Sanford Bernstein; J.P. Morgan; and PIMCO.

Real estate managers: LaSalle; PMRealty; and RREEF.

The master trustee and global custodian is National Bank of Detroit; the investment consultant is Frank Russell.

The key person overseeing the investment management of the fund is David J. Dykstra, director-pension assets.

General Board of Pensions of the United Methodist Church

	($ millions)
Total assets	3,566
Defined benefit	1,575
Defined contribution	1,991
Other	1,991
Employer DB contributions	0
Benefit payments	111
Employer DC contributions	174

Internally managed assets:	
Total DB	149
Defined benefit asset mix:	
Stocks	60%
Fixed income	17%
Cash equivalents	10%
Real estate equity	4%
GICs/BICs	9%
Defined contribution asset mix:	
Other stock	56%
Fixed income	21%
Cash equivalents	10%
GICs/BICs	10%
Real estate	3%

EVANSTON, Ill. — As of Sept. 30, the General Board of Pensions of the United Methodist Church's total employee benefit assets increased 22.8% to $3.566 billion from $2.903 billion a year earlier. Defined benefit assets increased 6.4% during the same period, to $1.575 billion from $1.48 billion. Defined contribution assets increased 39.9%, to $1.991 billion from $1.423 billion.

Equity managers: Domestic — ANB; Ariel; Batterymarch; Capital Guardian; Columbus Circle; Delaware; Fidelity Management; INVESCO; Nicholas-Applegate; Olympic; Provident Investment; RCM; Westwood.

Fixed-income managers: Domestic — ANB; CIGNA; Criterion; Lincoln; STW.

Real estate managers: CIGNA; JMB.

Balanced managers: Delaware; Franklin.

The master custodian is Mellon Bank; the investment consultant is Hotchkiss and Associates.

Key personnel overseeing the investment management of the fund are F. Gale Whitson-Schmidt, chief financial officer; Diane Pinney, treasurer; and Mary Pat Kincaid, director of portfolio.

UMWA Health & Retirement Funds

	($ millions)
Total assets	5,300
Defined benefit	5,289
Defined contribution	11
401(k)	11
Employer DB contributions	62
Benefit payments	443

Internally managed assets:	
Total DB	650

Hedging devices used:
Stock options
Fixed-income futures

Defined benefit asset mix:	
Stocks	46%
Fixed income	47%
Cash equivalents	4%
Real estate equity	3%
Defined contribution asset mix:	
Other stock	23%
Fixed income	13%
Cash equivalents	42%
GICs/BICs	22%

WASHINGTON — As of Sept. 30, the UMWA Health & Retirement Funds' total employee benefit assets increased 12.8% to $5.3 billion from $4.7 billion a year earlier. Defined benefit assets increased 12.6% during the same period, to $5.28 billion from $4.7 billion. Assets in its defined contribution plan are $11.4 million.

Equity managers: Domestic — Argus; Barrow, Hanley; Concord Capital; Denver Investment; Dreman; Lazard Freres; Loomis, Sayles; T. Rowe Price; and Wells Fargo.

Fixed-income managers: Domestic — Criterion; Loomis; J.P. Morgan; and STW.

Real estate managers: AEW: Goldman, Sachs; Metropolitan Life; RREEF; and TCW.

The master trustee is Boston Safe.

Charles Stephens, director of investments, oversees the investment management of the fund.

United Nations Joint Staff Pension Fund

	($ millions)
Total assets	8,414
Defined benefit	8,414
Employer DB contributions	300
Benefit payments	450

Internally managed assets	8,414
Defined benefit asset mix:	
Stocks	43%
Fixed income	36.5%
Cash equivalents	9%
Real estate equity	11.5%

NEW YORK — As of Sept. 30, the United Nations Joint Staff Pension Fund's total assets increased 17.7% to $8.414 billion from $7.146 billion a year earlier.

The fund is internally managed but also invests in various unnamed real estate pooled vehicles.

The master trustee is the United Nations secretary-general; the global custodian is Fiduciary Trust International, which also provides investment advice.

Key personnel overseeing the investment management of the fund are J. Richard Foran, assistant secretary-general; Pierre Henchoz, chief-investment management service; and Henry Ouma, deputy chief.

United Parcel Service

	($ millions)
Total assets	1,802
Defined benefit	908
Defined contribution	894
Thrift/savings	823
401(k)	71
Employer DB contributions	60
Benefit payments	10
Employer DC contributions	63

Internally managed assets:	
Total DB	35
Total DC	136
Defined benefit asset mix:	
Stocks	40%
Fixed income	25%
Cash equivalents	22%
GICs/BICs	9%
Other	4
Defined contribution asset mix:	
Company stock	8%
Other stock	15%
Fixed income	23%
Cash equivalents	21%
GICs/BICs	24%
Other	9%

GREENWICH, Conn. — As of Sept. 30, United Parcel Service's total employee benefit assets increased 24.9% to $1.802 billion from $1.443 billion a year earlier. Defined benefit assets increased 27% during the same period, to $908 million from $715 million. Defined contribution assets increased 22.8%, to $894 million from $728 million.

Managers: Domestic — Sanford C. Bernstein; Connecticut National; Equitable; First Fidelity; Mitchell Hutchins; and J.P. Morgan.

The master trustee is Bankers Trust.

Key personnel overseeing the investment management of the fund are Robert Markmann, investments manager, and Bruce Bissell, investments supervisor.

Managers scorecard: Feb. 5.

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United Technologies Corp.

	($ millions)
Total assets	8,261
Defined benefit	6,005
Defined contribution	2,256
Other	2,256

Hedging devices used:
Stock options
Bond options
Stock index futures
Fixed-income futures

HARTFORD, Conn. — As of Sept. 30, United Technologies Corp.'s total employee benefit assets increased 18% to $8.261 billion from $7 billion a year earlier.

The company's defined benefit assets increased 13.3% during the same period, to $6.005 billion from $5.3 billion. Assets in its defined contribution plan increased 31%, to $2.256 billion from $1.7 billion.

The master trustee and global custodian is Citibank.

Key personnel overseeing the investment management of the fund are F.M. Hawk, assistant treasurer; M.J. Vrissis, manager-pension investments; and R.J. Cepelak, manager-pension investments.

U S WEST Inc.

	($ millions)
Total assets	9,800
Defined benefit	8,100
Defined contribution	1,700
401(k)	1,500
ESOP	200
Employer DB contributions	0
Benefit payments	330
Employer DC contributions	63
Internally managed assets:	
Total DB	1,400
Defined benefit asset mix:	
Stocks	45%
Fixed income	34%
Cash equivalents	10%
Real estate equity	8%
Venture capital	3%
Defined contribution asset mix:	
Company stock	60%
Other stock	13%
GICs/BICs	21%
Other	6%

ENGLEWOOD, Colo. — As of Sept. 30, U S WEST Inc.'s total employee benefit assets increased 20.5% to $9.8 billion from $8.133 billion a year earlier.

Defined benefit assets increased 16.6% during the same period, to $8.1 billion from $6.949 billion. Assets in its defined contribution plans increased 43.6%, to $1.7 billion from $1.184 billion.

The master trustee and global custodian is Boston Safe Deposit and Trust.

USX Corp.

	($ millions)
Total assets	9,825
Defined benefit	9,500
Defined contribution	325
Employer DB contributions	0
Benefit payments	964
Employer DC contributions	20
Internally managed assets:	
Total DB	9,500
Total DC	200
Defined benefit asset mix:	
Stocks	58%
Fixed income	25%
Cash equivalents	14%
Real estate equity	3%
Defined contribution asset mix:	
Company stock	50%
Other stock	3%
Fixed income	12%
GICs/BICs	35%

PITTSBURGH — As of Sept. 30, USX Corp.'s total employee benefit assets increased 10.9% to $9.825 billion from $8.86 billion a year earlier. Defined benefit assets increased 11.1% during the same period, to $9.5 billion from $8.55 billion. Defined contribution assets increased 4.8%, to $325 million from $310 million.

The trustees are J.P. Morgan and U.S. Trust; the global custodian is J.P. Morgan.

Key personnel, overseeing the investment management of the fund are Gary A. Glynn, president, and Peter C. Lincoln, vice president-investments, both of U.S. Steel & Carnegie Pension Fund.

Utah State Retirement Fund

	($ millions)
Total assets	3,908
Defined benefit	3,908
Employer DB contributions	137
Benefit payments	122
Internally managed assets:	
Total DB	2,380
Hedging devices used:	
Stock options	
Defined benefit asset mix:	
Stocks	46%
Fixed income	35%
Cash equivalents	10%
Real estate equity	6%
Mortgages	1%
Other	2%

SALT LAKE CITY, Utah — As of Sept. 30, total employee benefit assets of the Utah State Retirement Fund increased 21.9% to $3.908 billion from $3.19 billion a year earlier. All assets are defined benefit.

Equity managers: Domestic — Atalanta/Sosonoff; Dimensional Fund; Smoot, Miller & Cheney; and Value Line.

International — Baring and State Street Bank.

Real estate manager: F.I.A.

Investment management consultants are SEI and Mercer Meidinger Hansen.

Key personnel overseeing the investment management of the fund are W. Dan Smith, investment officer, and Richard Cherry, assistant investment officer.

Pensions & Investments welcomes letters to the editor. Letters should include name, address and the company of the writer.

The editors reserve the right to edit any letter for reasons of space or clarity.

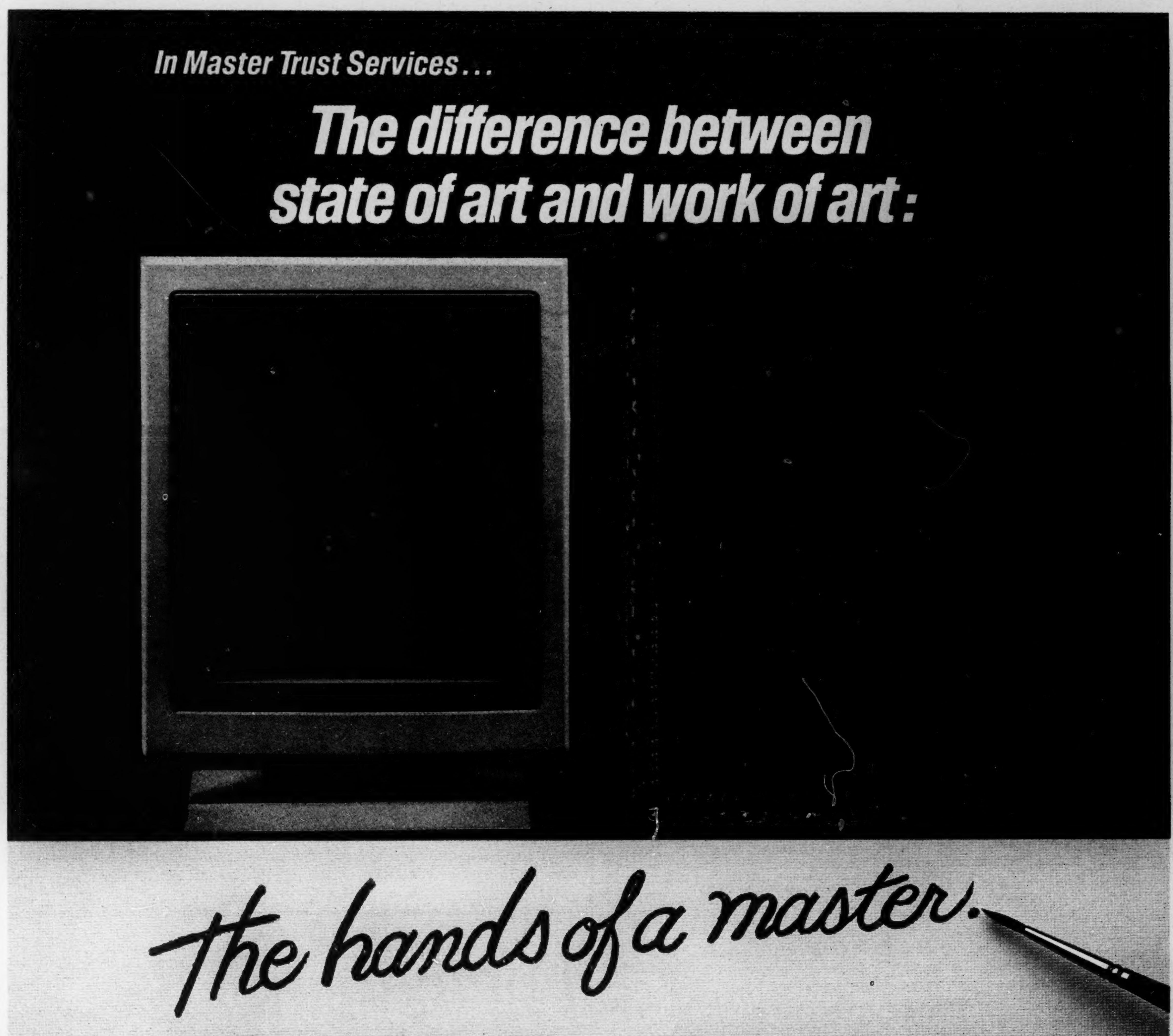
Virginia Supplemental Retirement System

	($ millions)
Total assets	10,244
Defined benefit	10,244
Employer DB contributions	733
Benefit payments	348
Internally managed assets	1,487
Hedging devices used:	
Stock options	
Bond options	
Stock index futures	
Fixed-income futures	
Defined benefit asset mix:	
Stocks	54.5%
Fixed income	21.8%
Cash equivalents	18%
Real estate equity	5.7%

RICHMOND, Va. — As of Sept. 30, Virginia Supplemental Retirement System's assets increased 27.4% to $10.244 billion from $8.041 billion a year earlier. All assets are in defined benefit plans.

Managers: Ardsley Partners; Bankers Trust; Sanford C. Bernstein; Concord Capital; Corinthian Capital; Delaware Investment Advisors; Equitable; Fidelity Management; GAMCO; Hutson; IDS Advisory; Jundt/Capen; LaSalle Advisors; Lehman Management; Lincoln Capital; Loomis, Sayles; MacKay-Shields; Massachusetts Financial; Mellon Capital; Merganser; Metropolitan Life; Miller, Anderson & Sherrerd; J.P Morgan; New England; Nicholas-Applegate; Pacific Financial; The Phoenix; Prudential; Rosenberg Institutional; Security Capital; Donald Smith; and Sovran.

The master custodian is Boston Safe Deposit; the investment consultants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FPB-180A

are Rogers, Casey and Pension Consulting Alliance.

Key personnel overseeing the investment management of the fund are are Timothy R. Barron, director-investments, and Mary Cahill and Malcolm West, deputy directors-investments.

W

Washington State Investment Board

	($ millions)
Total assets	12,660
Defined benefit	12,660
Internally managed assets:	
Total DB	6,743
Hedging devices used:	
Stock options	
Stock index futures	
Defined benefit asset mix:	
Stocks	29.8%
Fixed income	32.8%
Cash equivalents	9.1%
Real estate equity	9.7%
Mortgages	1.7%
Other	16.9%

OLYMPIA, Wash. — As of Sept. 30, the Washington State Investment Board's total employee benefit assets increased 16.5% to $12.66 billion from $10.867 billion a year earlier. All are defined benefit assets.

Equity managers: Domestic — Columbia; Hotchkis and Wiley; Lord, Abbett; Mellon Capital; Smith & Co.; United Capital; and Wells Fargo.

The custodian is Bank of New York; the investment consultant is Frank Russell.

Key personnel overseeing the investment management of the fund are David Weig, executive director; Greg Baarson, deputy director; and Marc Fovinci, senior investment officer.

Westinghouse Electric Co.

	($ millions)
Total assets	5,828
Defined benefit	4,007
Defined contribution	1,821
401(k)	1,821
Employer DB contributions	176
Benefit payments	406
Employer DC contributions	59
Internally managed assets:	
Total DB	1,633
Defined benefit asset mix:	
Stocks	57.2%
Fixed income	24.9%
Cash equivalents	1.3%
Real estate equity	12.9%
Mortgages	3.7%
Defined contribution asset mix:	
Company stock	15%
Fixed income	5%
GICs/BICs	80%

PITTSBURGH — As of Sept. 30, Westinghouse Electric Co.'s total employee benefit assets increased 21.4% to $5.828 billion from $4.8 billion a year earlier. Defined benefit assets increased 8.3% during the same period, to $4.007 billion from $3.7 billion. Assets in a 401(k) plan increased 66% to $1.821 billion from $1.1 billion.

The master trustees are Mellon Bank and Pittsburgh National Bank; the global custodian is State Street Bank & Trust; the investment consultant is Wilshire Associates.

Key personnel overseeing the investment management of the fund are Thomas G. Scannell, director, and Joanne Welsh, manager.

State of Wisconsin Investment Board

	($ millions)
Total assets	20,033
Defined benefit	20,033
Employer DB contributions	600
Benefit payments	450
Internally managed assets	20,033
Hedging devices used:	
Stock options	
Bond options	
Fixed-income futures	
Defined benefit asset mix:	
Equities	56%
Fixed income	35%
Cash equivalents	6%
Real estate equity	2.5%
Mortgages	0.5%

MADISON, Wis. — As of Sept. 30, the State of Wisconsin Investment Board's total employee benefit assets increased 22% to $20.033 billion from $16.419 billion a year earlier.

All assets are in an internally managed defined benefit plan.

The master trustee is Morgan Guaranty; the global custodian is Northern Trust.

Key personnel overseeing the investment management of the fund are Patricia Lipton, executive director, and James Severance, assistant executive director.

The International Bank for Reconstruction and Development (World Bank)

	($ millions)
Total assets	3,292
Defined benefit	3,292
Employer DB contributions	42
Benefit payments	55
Hedging devices used:	
Stock options	
Defined benefit asset mix:	
Stocks	51.2%
Fixed income	31.9%
Cash equivalents	8.2%
Real estate equity	5.7%
Other	3%

WASHINGTON — As of Sept. 30, total employee benefit assets of the International Bank for Reconstruction and Development (The World Bank) increased 22.5% to $3.292 billion from $2.687 billion a year earlier. All assets are defined benefit.

The master trustee is State Street Bank; the global custodian is Northern Trust; the investment consultant is Strategic Investment Partners.

Key personnel overseeing the investment management of the fund are Nestor V. Santiago, pension plan administrator; Kelda J. Caldwell, pension investment unit chief; and Anthony Albert, pension investment control officer.

X

Xerox Corp.

	($ millions)
Total asset	3,405
Defined benefit	214
Defined contribution	3,191
Profit-sharing	3,191
Employer DC contributions	101
Hedging devices used:	
Stock index futures	
Defined benefit asset mix:	
Stocks	51.2%
Fixed income	24.2%
Cash equivalents	15.9%
Real estate equity	7.1%
Other	1.6%
Defined contribution asset mix:	
Other stock	50.1%
Fixed income	6.6%
Cash equivalents	12.4%
GICs/BICs	21.7%
Other	9.2%

STAMFORD, Conn. — As of Sept. 30, Xerox Corp.'s total employee benefit assets increased 25% to $3.405 billion from $2.724 billion a year earlier.

The master trustee and global custodian is State Street Bank; the investment consultants are Frank Russell and Collins Associates.

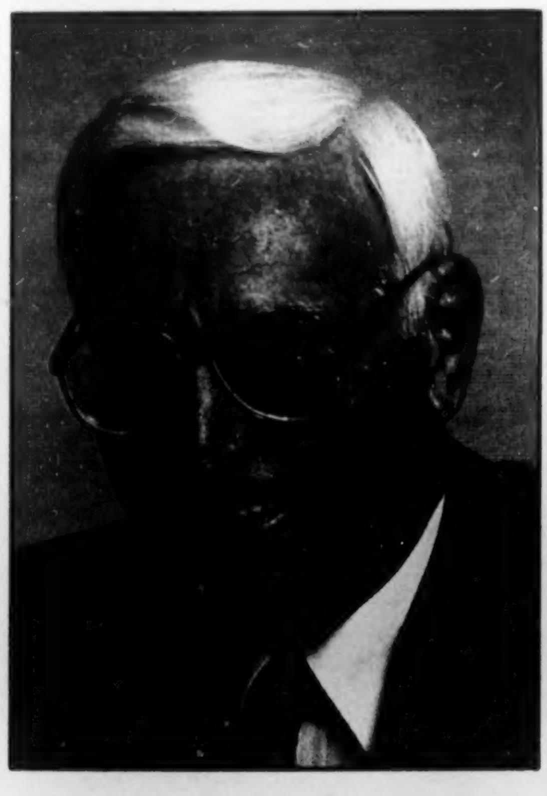
Key personnel overseeing the investment management of the fund are Robert R. Evans, assistant treasurer; Gerard J. Paolini, manager-trust investment strategy; Jainel M. Buell, manager-trust investments; and Toni S. Hanna, trust investment analyst.

The special report in *Pensions & Investments*' June 25 issue will be a directory of international and global investment management firms.

Federal fund sits in cash

Congress, participants set strategy

By Joel Chernoff


Francis Cavanaugh expects the conservative strategies to ebb.

WASHINGTON — Thirty-three months after cranking up investment operations, the $5 billion Federal Retirement Thrift Investment Board still has 98.6% of its assets in cash equivalents.

While that would be cause for alarm for most retirement plans, there is a good explanation for the investment policy. A combination of severe constraints on the plan's investment activities and conservatism by participants has conspired to keep the vast majority of the fund's assets in a pool of special Treasury securities that is reinvested daily by the plan's staff.

Wells Fargo Investment Advisors, the fund's sole external manager, is running only $51 million in a stock index fund and $18 million in a bond index fund, both in commingled pools, after two years.

As for most index funds, the fees for those accounts are extremely low. In 1988, the first year some thrift-plan participants were able to direct part of their contribution to the stock and bond funds, Wells Fargo picked up only about a paltry $900 in management fees on the accounts. Assets in those funds had grown to $11.7 million by the end of 1988, from zero at the year's start.

Fee revenue for 1989 was not available.

The promise, of course, is in the plan's projected growth — it is expected to grow to between $40 billion and $50 billion by the end of the century, and eventually become the nation's largest retirement plan, said Francis X. Cavanaugh, the thrift plan's executive director. In fact, the plan just crossed the $5 billion threshold this month, up from $4.3 billion as of Sept. 30.

Presently, however, severe restrictions remain on how assets can be invested. Some rules will be lifted over time, but a few are scheduled to continue until 1997.

There is a ray of hope: Pending legislation, expected to be passed by Congress early this year, will significantly lift many of those restrictions, freeing up more assets that could be invested in stocks and bonds.

The investment restrictions stem from the complex nature of the thrift plan. Created by Congress in 1986, it was part of an overhaul of the federal retirement system. Most federal employees hired after Jan. 1, 1984 automatically were included in the defined contribution plan, but participants in the old Civil Service Retirement System also were permitted to participate (425,000 of the plan's 1.5 million members are active members of the old system).

But any contributions they make to the thrift plan are restricted to the plan's G Fund, which is invested solely in special, non-marketable Treasuries. Those Treasuries yield the average rate of outstanding Treasury securities with maturities of four or more years.

The 876,000 participants in the new Federal Employees' Retirement System automatically participate in the thrift plan, and the government contributes 1% of their pay to the plan. But those assets also must be invested in the G Fund.

Further restrictions apply to voluntary contributions now made by about half of the retirement system's participants. In 1988, those participants could direct only up to 20% of their contributions to the plans's two other investment options: the C Fund, an equity fund that tracks the Standard & Poor's 500 Stock Index, and the F Fund, a fixed-income fund that tracks the Shearson Lehman Hutton Government/Corporate Bond Index.

For assets contributed in 1989, up to 40% could be directed to the stock and bond funds. The restrictions on new contributions phase out by 1992, but remain in place for old assets through 1997, creating a recordkeeping nightmare the thrift board would like to eliminate.

As of Sept. 30, 1.1% of the thrift plan's assets were invested in the stock fund and 0.3% in the bond fund. That's a significant increase from the year before, when only 0.2% of assets were invested in stocks and 0.1% in bonds.

About 26% of those eligible to direct assets invest in stocks, Mr. Cavanaugh said. "They're getting used to it."

Direction by thrift-plan participants into stocks and bonds is similar to that seen in private-sector plans, he said, noting that most participants prefer investments that do not bear principal risk, such as guaranteed investment contracts.

Government matches of participant contributions face still tougher rules. The federal government matches contributions by participants dollar for dollar up to their first 3% of pay, and 50 cents on the dollar for additional amounts up to 5% of deferred pay.

But the government matches must be invested in the G Fund, until investment restrictions gradually are phased out between 1993 and 1997.

Bipartisan legislation — H.R. 2514 and its companion, S. 1354 — would eliminate investment restrictions on contributions, except for money contributed by CSRS participants. If Congress approves the measure in the first half of this year, the thrift plan likely will be able to eliminate restrictions on those assets by January 1991, Mr. Cavanaugh said.

That could lead to a significant shift into stocks and bonds and out of the special Treasuries. In addition, as new employees join the federal government — eventually making up its entire roll of 3 million employees — they will have discretion of a rapidly growing pool of assets.

Still, there are no promises that Wells Fargo will reap the benefit of such a shift: The firm's three-year contract expires at the end of this year, and the thrift plan will issue a request for proposals around midyear. Mr. Cavanaugh, however, expressed satisfaction with the money manager. ■

Foreign

Continued from page 16

but doesn't expect to do so internationally until the Japanese market — the world's largest in capitalization — appears more attractive in its stock valuations.

As its first international commitment — excluding previous holdings of Canadian bonds and occasional purchases of American depository receipts in the past — the Wisconsin Investment Board, Madison, made a substantial first commitment of $705 million. Even so, that amount weighed in at less than 4% of assets of the $20.033 billion the fund reported as of Sept. 30.

Wisconsin's approach to foreign investing is deliberate and careful, said Patricia Lipton, the fund's executive director. Gradually moving toward an international exposure of 10% of total equities and 10% of bonds, Wisconsin is phasing in foreign equity investments over five years and foreign bond allocations over three years. As of Sept. 30, the fund had 56% in equities and 35% in fixed income.

The fund, which otherwise manages its assets in-house, is using a combination of in-house and external money managers for its foreign investments. According to Ms. Lipton, no timetable has been set for deciding if or when the fund will manage all international assets in-house.

Similar to most pension fund sponsors, Ms. Lipton cited a desire for diversification and enhanced returns as main motives for investing abroad.

She also pointed to the contribution foreign investing and awareness of foreign economies and markets make to investing domestically.

"You can't understand the domestic market without knowing what goes on internationally," she said.

Even so, few jumbo funds matched Wisconsin's foreign allocation; in fact, several funds bucked the overall growth trend.

Among the employee benefit funds reporting smaller international holdings as of Sept. 30, 1989, than they had reported a year earlier are E.I. du Pont de Nemours & Co., the State Universities Retirement System of Illinois; Allied-Signal Inc.; Sears, Roebuck & Co.; North Carolina Department of State Treasurer; Aluminum Co. of America; Chevron Corp.; and American Stores Co. ■

Managers

Continued from page 15

ranking in the asset classes, however, reflects the number of pension funds using them only in that class.

Most of the managers that ranked high in this survey also did so in 1988. There was some shifting within the rankings and some slight changes in the number of accounts listed. These shifts, however, could be due to the movement of some pension funds into or out of the Top 200.

What distinguishes the 10 most frequently mentioned managers seemed to be the multiple product lines they offer.

"They're all big," said Roger Bransford, national manager-asset consulting at TPF&C, commenting on the 10 most frequently cited managers. "Part of it is the ability to apply resources in efficient management, and part of it is the ability to diversify into multiple areas," he said.

In addition to ranking No. 1 overall, J.P. Morgan ranked second in fixed income, with 24 mentions, and third among international managers, with 12 mentions. The driving force behind Morgan's growth and loyal client following has been the breadth of its product lines, said David Brigham, managing director.

"Our growth as been pretty broad based," Mr. Brigham said, and has come from areas including real estate, structured investments and international. "People are very much interested in international, fixed as well as equity, and currency has taken on a lot of interest among our clients," he said.

International, however, is one sector among many generating growth, Mr. Brigham emphasized. Generally, clients seek out Morgan for its active, value-added approach, he said. "A lot of it is problem solving," and tailoring investments to a client's particular needs, Mr. Brigham said.

Pacific Investment Management Co., Newport Beach, Calif., ranked No. 1 among fixed-income managers with 27 mentions. Officials there could not be reached for comment by press time.

Loomis, Sayles & Co. Inc., Boston, an active fixed-income manager with a broad range of investment styles decentralized throughout its regional offices, followed in third place with 14 mentions. Criterion Investment Management Co., Houston, which uses a proprietary computerized system to evaluate and monitor risk for individual bonds and bond portfolios, ranked fourth with 13 mentions.

Miller, Anderson & Sherrerd, Bala Cynwyd, Pa., an active manager using sector analysis, and Wells Fargo, the largest of the fixed-income indexers, tied for fifth place, with 12 mentions each.

Wells Fargo was the top equity manager with 30 mentions, and tallied 10 mentions among international managers. Wells Fargo is the largest index fund manager in all areas — domestic, international, equity and fixed income.

Principals at both Wells Fargo and Alliance Capital Management L.P., New York, which ranked second among equity managers and ninth overall, said passive investment strategies have been fueling their growth in recent years, as funds shift their investments into passively managed cores that use specialized or active strategies to enhance them.

"Our passive business has grown more rapidly than our traditional active equity business," said Dave H. Williams, chairman at Alliance. The shift away from active to passive strategies has also been accompanied by an interest in more specialized investment services, including indexing international securities, Mr. Williams said.

Concern over high management fees has partly led to the move to passive management, Mr. Williams said. "It's very importantly cost-driven," he said. "Price cutting in our industry seems to take the form of shifting funds toward passive" investment strategies, he added.

Mellon Bank and Bankers Trust Co. ranked third and fourth among equity managers, with 23 and 20 mentions, respectively. Bankers Trust also has a large fixed-income capability and received eight mentions. Overall, Bankers Trust ranked seventh. It also was the top master trustee/custodian with 33 mentions.

Growth at Bankers Trust has come from cash management, international, active value equity and indexing as well as bank investment contract operations, said Michael Fisher, senior vice president. Although Bankers Trust is the second-largest indexing manager with $40.8 billion, it is on BICs that the firm has placed its bets for the 1990s, Mr. Fisher said.

"In the world of fixed-income management, (BICs) are a major part of our thrust over the years ahead," he said. "There clearly has arisen a need for credit risk analysis, that people just a few years ago would not have thought about at all."

While the investment management operations of major banks were not always perceived as favorably as they are today, being able to offer a wide array of investment products has spurred growth in the industry overall, Mr. Fisher added.

Capital Guardian Trust Co., Los Angeles, and Loomis, Sayles tied for fifth among managers in the equity sector with 16 mentions each.

International investing has been a major growth area, managers agreed. State Street Bank and Trust Co. was most No. 1 with 15 mentions. State Street managed more than $10 billion in assets internationally, as of Dec. 31, up 33% from $7.5 billion a year earlier, said Nicholas Lopardo, senior vice president and chief investment officer-asset management.

Most of the growth State Street has enjoyed in the past year has come from the international sector, Mr. Lopardo said. Of the 47 new clients that State Street added in 1989, 55% to 65% made international investments, he said.

Capital Guardian Trust ranked second among international managers with 14 mentions, and J.P Morgan followed with 12 mentions. Baring International Investment, Ltd., London, had 11 mentions. Brinson Partners Inc., Chicago, and Morgan Grenfell Investment Services Ltd., London, tied for fifth place with 10 mentions each.

Among real estate managers, The RREEF Funds, San Francisco, Calif., was No. 1 with 76 mentions. JMB Institutional Realty, Chicago, and Equitable followed with 34 and 33 mentions, respectively. Prudential ranked fourth with 27 mentions, and Aetna Life Insurance Co. ranked fifth with 24 mentions. ■

Top consultants

	Times mentioned
Frank Russell	18
SEI	13
Wilshire	11
Callan	10
Rogers, Casey	6

Top master trustees/custodians

	Times mentioned
Bankers Trust	33
Boston Safe	19
Northern Trust	18
State Street	17
Mellon Bank	12
Bank of New York	11
Chase	10
Citibank	6
Continental Bank	5
Harris Trust	5
Security Pacific	5

Top global custodians

	Times mentioned
Chase	16
State Street	15
Bankers Trust	13
Boston Safe	13
Northern Trust	10

Oregon mulling tax on pension benefits

SALEM, Ore. — Oregon voters this year will decide whether a state law on the taxation of public pension benefits will stand.

Last year, the state Legislature passed a measure requiring equal taxation of state and federal retirees' benefits, but increased state benefits to offset the tax.

Previously, state pensions had not been subject to state income tax, said Elizabeth Stockdale, attorney in charge of the tax section at the state Department of Justice.

The law was changed to bring the state into compliance with a U.S. Supreme Court decision, she said.

In that decision, Davis vs. Michigan, the court held Michigan was discriminating unlawfully on the basis of compensation by exempting state, but not federal, pensions from taxation. The decision came down at the end of March.

A body of case law, however, suggests the level of pension benefits may be considered a contractual right, Ms. Stockdale said.

Although taxing these benefits may not actually be breaking such a contract, the Legislature decided to protect itself from such accusations by increasing state benefits.

The increase aroused opposition from federal employees in Oregon, and has led to the referendum. Oregon residents may put any state law to a vote if they collect sufficient signatures on petitions. About 62,000 were collected for this referendum, far more than the roughly 42,000 required.

The vote will come in November. If voters approve the new law, it will apply to both the 1989 and 1990 tax years.

Also, Ms. Stockdale said, the Legislature has set up a task force to take a more extensive look at how all pension benefits, public and private, are taxed. ■

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Real estate

Continued from page 15

cash.

The more typical corporate approach to real estate has been that of the Owens-Illinois Inc. pension fund, Toledo, Ohio, which had $199.8 million in real estate, $6.6 million more than the $193.2 million the company reported a year earlier.

What looks like an increase is actually a drop when adjusted for normal appreciation, the result of sales of a small number of maturing properties.

One reason Owens-Illinois isn't putting more money in real estate, said Ronald C. Boller, vice president and director of benefit finance, is that he — like many other corporate pension officers — is concerned about the returns from real estate relative to other asset classes.

Investors, he said, talk about the vacancy rate for office buildings at being about 15% nationally. But, he said, when you consider the "economic vacancy rate" the actual vacancy is about twice the 15% figure.

The reasons that the number doubles, he said, is because office landlords are offering free rent and rent concessions, such as modifications to buildings to suit tenant needs, which detracts from the building's income.

Some plans, however, are allocating assets to realty because they believe real estate is the most undervalued asset class. But at this point, he said, that is not the view of real estate at his company, and his plan didn't invest any significant dollars in real estate in 1989.

"I think the plans that are putting money into real estate are the plans that have a target allocation for real estate and aren't there yet," said Mr. Boller.

Those employee benefit funds that did sharply increase dollar allocations to real estate were the public plans, which started investing in real estate after corporate funds.

Public funds also are still generally underfunded and are receiving larger employer contributions than corporate funds.

The $19.3 billion Ohio Public Employees' Retirement System, Columbus, increased its investment in real estate to $646 million from $368 million a year earlier.

But Ray McLaughlin, executive director, said his fund is growing so large that even with the increase, his plan has only about 3% of assets in equity real estate currently. The investment looks large until you look at the size of the total fund, he said.

His fund, he said, really didn't begin investing in some types of real estate until 1986. "We are still very negative on real estate," he said, but there are some types — such as apartments and small properties like strip shopping centers — that could generate good cash flow.

Those property classes are where the fund is making most of its investment, Mr. McLaughlin said.

Another public fund, the $11.178 billion Oregon Public Employes Retirement System, Salem, increased its real estate investment to $470 million from $375 million.

But James C. George, investment manager, like Mr. Dootson and Mr. Boller, said total fund assets have increased so much real estate investment is only 4.5% of assets.

The fund is making only a "gradual" commitment to the "troubled" asset class where there is a surplus of product, he added.

While he wants his fund to have a 10% allocation to real estate, it might take the fund 10 years to do so, he said. ■

Bottom 800 defined contribution asset mix

Aggregate

	1989
Domestic stock	18.6%
Company stock	23.0
Domestic fixed income	10.9
Cash	6.8
Real estate equity	0.6
Mortgages	0.1
Annuities	0.9
GIC/BIC	36.9
Int'l equity	0.3
Int'l fixed income	0.0
Venture capital	0.0
Oil/gas	0.0
LBOs	0.0
Private placements	0.0
Other	1.9

Corporate

Domestic stock	18.8%
Company stock	26.2
Domestic fixed income	7.9
Cash	5.8
Real estate equity	0.6
Mortgages	0.0
Annuities	0.1
GIC/BIC	38.7
Int'l equity	0.3
Int'l fixed income	0.0
Venture capital	0.0
Oil/gas	0.0
LBOs	0.0
Private placements	0.0
Other	1.6

Public

Domestic stock	28.0%
Domestic fixed income	21.1
Cash	10.4
Real estate equity	1.0
Mortgages	0.8
Annuities	3.9
GIC/BIC	28.0
Int'l equity	0.0
Int'l fixed income	0.0
Venture capital	0.1
Oil/gas	0.0
LBOs	0.0
Private placements	0.2
Other	6.5

Union

Domestic stock	13.4%
Domestic fixed income	43.5
Cash	19.7
Real estate equity	0.9
Mortgages	0.4
Annuities	13.3
GIC/BIC	8.5
Int'l equity	0.0
Int'l fixed income	0.0
Venture capital	0.0
Oil/gas	0.0
LBOs	0.0
Private placements	0.0
Other	0.3

Top 200 defined contribution average asset mix

Corporate

	1989
Company stock	28.7%
Other stock	17.1
Fixed income	10.0
Cash	5.7
GIC/BIC	35.7
Annuities	0.0
Other	2.8

Public

Stocks	25.0
Fixed income	63.0
Cash	5.0
GIC/BIC	2.9
Annuities	0.0
Other	4.1

Union

Stocks	15.3
Fixed income	19.3
Cash	53.4
GIC/BIC	7.3
Annuities	0.0
Other	4.7

Top 200 defined benefit average asset mix

Corporate

	1989	1988
Stocks	50.2%	48.6%
Fixed income*	32.6	31.4
Cash	7.3	9.0
Real estate equity	4.5	5.1
Mortgages	0.3	0.3
GIC/BIC	1.2	2.4
Annuities	1.3	1.2
Other	2.6	2.0

Public

Stocks	37.2%	35.2%
Fixed income*	44.9	47.6
Cash	9.0	9.7
Real estate equity	3.8	3.4
Mortgages	2.4	2.4
GIC/BIC	0.2	0.5
Annuities	0.0	0.0
Other	2.5	1.2

Union

Stocks	41.9%	34.6%
Fixed income*	44.4	46.4
Cash	5.7	8.8
Real estate equity	3.3	3.4
Mortgages	2.1	2.1
GIC/BIC	2.1	2.2
Annuities	0.0	2.0
Other	0.5	0.5

*Includes mortgage-backed securities

PBGC may revamp investment policies

By Joel Chernoff

WASHINGTON — The Pension Benefit Guaranty Corp. is about two months away from receiving an asset allocation study that might lead to an overhaul of the investment of its $2.55 billion in assets.

James B. Lockhart III, the agency's executive director, has pointed to investment strategy as one area in which he hopes to improve the agency's operations.

Meanwhile, the PBGC's combined assets returned 19.6% for the year ended Sept. 30, bringing in some $400 million in investment income, compared with only about $5 million the previous year.

Combined with $600 million in income from premiums paid by employers — but offset by $330 million in benefit payments — the agency was able to make a significant dent in its $1.5 billion deficit.

The agency also paid out $320 million in benefits to LTV Steel retirees from three troubled LTV pension plans and PBGC assets. The PBGC is trying to restore those plans to The LTV Corp.; the Supreme Court is scheduled to hear oral arguments on the case on Feb. 27.

The precise size of the PBGC's current deficit is not yet available and will reflect the influence of various accounting rules.

Consultants Wilshire Associates Inc., Santa Monica, Calif., and Goldman, Sachs & Co., New York, are evaluating the agency's asset and liability structure.

See **PBGC** *on page 69*

Bottom 800 defined benefit asset mix

Aggregate

	1989	1988
Domestic stock	44.3%	41.70%
Domestic fixed income*	31.2	32.80
Cash	9.3	11.30
Real estate equity	4.0	4.10
Mortgages	1.1	0.80
GIC/BIC	4.1	4.90
Private placements	0.1	0.10
Annuities	0.7	0.60
International	3.2	2.10
Venture capital	0.4	0.40
Oil/gas	0.1	0.04
LBOs	0.1	0.03
Other	1.4	1.13

Corporate

Domestic stock	47.5%	46.30%
Domestic fixed income*	27.0	26.60
Cash	9.4	11.40
Real estate equity	4.2	4.10
Mortgages	0.4	0.30
GIC/BIC	4.3	5.80
Private placements	0.1	0.10
Annuities	0.8	0.80
International	4.1	2.90
Venture capital	0.6	0.60
Oil/gas	0.1	0.06
LBOs	0.1	0.05
Other	1.4	0.99

Public

Domestic stock	39.0%	36.50%
Domestic fixed income*	41.0	44.40
Cash	8.3	10.70
Real estate equity	3.8	4.00
Mortgages	2.1	0.90
GIC/BIC	1.8	0.90
Private placements	0.2	0.01
Annuities	0.2	0.30
International	2.0	1.00
Venture capital	0.3	0.20
Oil/gas	0.0	0.01
LBOs	0.0	0.00
Other	1.3	1.08

Union

Domestic stock	34.6%	29.90%
Domestic fixed income*	35.8	39.80
Cash	11.9	12.00
Real estate equity	3.3	4.70
Mortgages	3.3	2.60
GIC/BIC	8.2	8.10
Private placements	0.1	0.20
Annuities	1.0	0.06
International	0.1	0.30
Venture capital	0.1	0.10
Oil/gas	0.0	0.02
LBOs	0.0	0.00
Other	1.6	2.22

*Includes mortgage-backed securities

MONEY MOVERS

Pacific Gas & Electric Co.

SAN FRANCISCO — Pacific Gas & Electric Co. hired PRIMCO Capital Management Inc., Louisville, Ky., to manage the guaranteed investment contract portion of its $1.2 billion defined contribution plan.

GICs account for approximately 3% of the defined contribution plan, according to Sunny Oberoi, director-investments and benefit finance. Approximately 90% of the plan's assets are invested in company stock, he said. The remainder is in other investment options.

Previously, GIC investments were handled internally. Pacific Gas & Electric decided to hire an outside manager after deciding to move from a fixed option to a blended GIC.

The fund also recently hired Bankers Trust Co. — Investment Management Group, New York, to manage $220 million in passive equities.

Bankers Trust will manage two passive portfolios. A $100 million international portfolio will track the Morgan Stanley Capital International Europe Australia Far East Index; a $120 million domestic portfolio will track the Russell 2500 Index.

The change was made in order to achieve a strategy of more passive management, according to Mr. Oberoi. To fund Bankers Trust, three active managers were terminated The company declined to name.

The overall asset mix of the fund is now approximately 58% domestic equity, 12% non-U.S. equity, 10% real estate and 20% fixed income.

Frank Russell Co., Tacoma, Wash., helped in the search.

Kansas Gas & Electric Co.

WICHITA, Kan. — Kansas Gas & Electric Co. hired Fidelity Management Trust Co., Boston, to manage a $31 million immunized bond portfolio for its $103 million defined benefit pension plan.

Bruce Burns, manager-investor relations, said the immunized portfolio will use a structured approach to provide an "enhanced return" to help match cash flow with liabilities associated with retired lives.

Wilshire Associates, Santa Monica, assisted in the search, he said.

Mr. Burns said assets for the immunization will come from a $37 million fixed-income portfolio that had been managed by Criterion Investment Management Co., Houston, which was terminated. He said the utility will conduct a search to place the remaining $6 million.

Kansas Public Employees

TOPEKA, Kan. — The $3.7 billion Kansas Public Employees Retirement System hired Wells Fargo Investment Advisors, San Francisco, to run a $200 million South Africa-free, bank-free index fund.

Marshall Crowther, executive director of Kansas fund, said the move was made because the firm decided to go into indexing as a core. The state has bans on investing in companies doing business in South Africa and banks.

The Kansas fund terminated Capital Supervisors Inc., Chicago. The firm ran more than $200 million in an active equity strategy since 1971.

The remaining amount will be added to the domestic fixed-income portfolio run by the Boston office of Loomis, Sayles & Co. Mr. Crowther said the addition brings the weighting of the domestic fixed investments up to allocation targets.

Illinois Teachers Retirement

SPRINGFIELD, Ill. — The $8.5 billion Illinois Teachers' Retirement System has committed $50 million as the sole limited partner in a new venture capital fund managed by Weiss, Peck & Greer, New York, said William M. Stephens, chief investment officer.

Weiss, Peck & Greer also is raising another fund that will invest side by side with the Illinois fund. The side-by-side fund, which will be capped at $50 million, already has about $30 million in commitments and likely will close by the end of February, said Philip Greer, managing general partner.

Because the fund hasn't closed yet, he declined to identify the investors, but said they include pension funds, endowments, insurance companies and individuals.

Weiss, Peck & Greer will focus on start-up companies, with an occasional investment in a company at a more advanced stage of development, Mr. Greer said. Industry preferences include electronics, computer hardware and software, biotechnology and service businesses.

University of Santa Clara

SANTA CLARA, Calif. — The $95 million University of Santa Clara Endowment Fund, has hired Bankers Trust Co., New York, as its new custodian, replacing Wells Fargo Bank, San Francisco.

It also hired GAMCO Investors Inc., New York, and Fisher Investments, Woodside, Calif., as value-equity managers. GAMCO was given $2.5 million, and Fisher was given $25 million. In addition, the endowment placed $25 million into a long-term bond fund with The Common Fund, Fairfield, Conn.

The assignment of McCullough, Andrews & Cappiello Inc., San Francisco, the endowment's previous sole external adviser, was changed from a balanced manager to an equity-only manager. Assets that had been with the firm were used to fund the new managers.

Ralph H. Beaudoin, vice president for finance and business with the university, said the changes were made for greater diversification.

Southern California Auto Club

LOS ANGELES — The Automobile Club of Southern California's $220 million pension plan made its first international commitment by hiring State Street Bank & Trust Co., Boston, to manage $10 million in a commingled passive Morgan Stanley Capital International Europe Australia Far East account. That foreign allocation represented 5% of the pension fund's total assets.

Assets came from a reduction in several domestic managers' allocations, said Harold C. Mills, treasurer of the fund, who declined to name the managers involved.

State Street was chosen because of its performance "which has been good over the one-, three- and five-year periods," he said.

The fund used DeMarche Associates, Westwood, Kan., as its consultant.

F.W. Woolworth Co.

NEW YORK — The $515 million pension fund of F.W. Woolworth Co. hired Marvin & Palmer Associates Inc. to manage $30 million in international equities, according to Martin Tolep, director-pension asset management.

The plan's asset mix consists of roughly 10% international equities, 30% to 33% domestic equities, 45% to 50% fixed income and the remainder in real estate.

Marvin & Palmer was funded with assets taken from each of Woolworth's domestic managers. According to Mr. Tolep, no managers were terminated.

No consultant was used.

New York City Retirement

NEW YORK — The $45 billion New York City Retirement Systems hired State Street Bank & Trust Co., Boston, as custodian for its short-term assets, said a spokesman for the comptroller's office, which oversees the funds.

State Street will be responsible for trading between $1 billion and $2 billion each day in primarily overnight cash instruments. The spokesman said the search was conducted internally and was precipitated by the resignation of Irving Trust, New York, soon after it was taken over by Bank of New York in 1988.

The spokesman would not give a reason for Irving Trust's resignation or why State Street was chosen.

Denver Employees

DENVER — The $469 million Denver Employees Retirement Plan hired Denver Investment Advisors Inc., Denver, and Neuberger and Berman, New York, to manage $15 million each in intermediate fixed income, said Michael Heitzmann, executive director of the plan.

The fund trimmed some portfolios with other managers to fund the new firms, said Mr. Heitzmann.

Overall, the asset mix of the employees' plan is 45% domestic equities, 40% fixed income, 10% real estate, 3% international equities and 2% cash and miscellaneous.

Segal Advisors Inc. was the consultant.

In addition to the bond manager hires, the fund also plans to hire an international equity manager. According to Mr. Heitzmann, the decision is expected by mid-February. William M. Mercer Meidinger Hansen Inc., Denver, is helping the fund in that search.

Tallahassee Retirement System

TALLAHASSEE, Fla. — The $183 million City of Tallahassee Retirement System has hired Oppenheimer Capital, New York, to run a $25.6 million value-oriented equity portfolio, said Rick Atkinson, deputy treasurer.

Originally, the board had decided to hire Lehman Management Co., New York, to manage the portfolio, but reconsidered after Lehman underwent a management buy-out.

Mr. Atkinson emphasized fund officials still consider Lehman a strong firm but the buy-out "basically introduced an unknown quantity."

The hiring of Oppenheimer was the last piece in a restructuring of the $183 million fund. Officials now are funding contracts for five new equity managers and three new real estate managers with $28 million in cash and assets taken from terminated manager Frank Russell Investment Management Co., Tacoma, Wash., which had run most of the fund's assets for seven years.

The fund now will have nearly $100 million invested in stocks. Besides Oppenheimer, equity managers are Wells Fargo Investment Advisors, San Francisco, for commingled Standard & Poor's 500 Stock Index and extended market index accounts; Eagle Asset Management, St. Petersburg, Fla.; and the Calvert-Ariel Growth Fund, Washington.

Real estate managers, who will invest about $18 million in assets, are J.P. Morgan Investment Management Inc., New York; JMB Institutional Realty Corp., Chicago; and TCW Realty Advisors, Los Angeles.

Massachusetts Mutual Life Insurance Co., Springfield, Mass., runs the remaining $65 million in guaranteed investment contracts that expire in 1993. At that time, the fund will reconsider its fixed-income options.

Consultants on the restructuring were Callan Associates Inc. and William M. Mercer Meidinger Hansen Inc.

Houston Municipal Employees

HOUSTON — The $561 million Houston Retirement System has hired Amerindo U.S. Advisors Inc., Larkspur, Calif., to manage a $10 million equity account, according to Clifford Tuttle, fund administrator.

Mr. Tuttle said the fund was seeking a small-capitalization equity manager and Amerindo was suggested by SEI Corp., the fund's consultant.

Funding will be from cash flow.

Chicago Painters and Decorators

CHICAGO — The Chicago Painters and Decorators Pension Fund hired Strong/Corneliuson Capital Management Inc., Menomonee Falls, Wis., and Chicago Asset Management, Chicago, to manage equities for the fund.

Morley Capital Management Inc., Lake Oswego, Ore., also was hired to manage the guaranteed investment contract portion of the fund, according to Jack Marco, president of Marco Consulting Group, Chicago, and spokesman for the fund.

The two equity managers, as well as Wright Investors' Service, Bridgeport, Conn., a current manager, will each manage approximately $11 million of the $90 million fund. Morley will manage 20% of the fund, as will both current fixed-income managers, Gofen & Glossberg Inc., Chicago and Consistent Asset Management Co., Wilmington, Del.

Rutgers-State University

NEW BRUNSWICK, N.J. — Rutgers-The State University hired Reich & Tang L.P. and Goldman, Sachs Asset Management, both of New York, to manage a portion of its $110 million endowment fund.

Both firms will manage equities. Reich & Tang was allocated $20 million and Goldman Sachs, $10 million, according to Edward Kozack, assistant treasurer of the fund.

The overall asset mix of the fund is 60% equity and 40% fixed income, said Mr. Kozack. The two were funded with assets from a terminated manager that Mr. Kozack declined to name.

Hamilton & Co. Inc., Princeton, N.J., was the consultant.

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More managers list PIPER returns

Editor's note: *The following firms had funds that missed the deadline, were omitted or were in error when listed in the Pensions & Investments' Performance Evaluation Report for periods ended Sept. 30. All figures, except for international returns, are for funds that would have placed in the top quartile of their universe. Information was provided by Robin Stadler of Rogers, Casey & Associates, which compiles PIPER. All figures for periods of more than one year are compound annualized.*

CoreStates Investment Advisers' Equity Growth Fund returned 12.3% for the quarter, 32.9% for the year and 18.3% for the 10-year period.

Transamerica Life Insurance's Fixed-Income Separate Account T-2 returned 14.3% for the year and 16.3% for five years.

Provident Capital Management Inc.'s Special Equity Fund returned 35.1% for the year and 19.8% for 10 years. The firm's International Low P/E Fund returned 17.2% for the quarter and 32.4% for the year. ■

Japan

Continued from page 3

new law: employee funds that use investment advisers and in-house managers must be at least 8 years old; those wishing to manage assets in-house must have a minimum of 50 billion yen, or $342.9 million, in assets; and the minimum account size an investment adviser can manage is 1 billion yen, about $6.85 million — a figure that exceeds the amount of new money "the vast majority of employee pension funds" have in a year, said Mr. Booher.

According to Masanori Tsuno, vice president and business development director of Frank Russell Japan Co., the funds' annual cash flow totals about 1.5 trillion yen to 2 trillion yen, between $10.3 billion and $13.7 billion. For fiscal year 1990, beginning in April, that means perhaps about 100 billion yen, or $686 million, in pension assets would be available for discretionary investment advisers, he estimated.

To be eligible to manage Japanese pension assets, money managers must be licensed by the Ministry of Finance as discretionary investment advisers. So far, 138 firms, including some 40 foreign firms, have obtained such a license. In addition, 17 trust banks and 21 insurance companies now manage Japanese pension assets.

InterSec's Mr. Booher figures competition for pension assets will be hardest on non-Japanese money managers. "If there is a queue for obtaining (such) business . . . it's predictable who'd be in front," he said. "Toward the head of it would be the traditional lending banks; in the middle would be the Japanese securities companies that may have been providing services; and at the end would be the foreigners."

Nor can foreign money managers hope to attract what Mr. Booher calls a "logical target market" — the pension funds of foreign-based companies operating in Japan. Since the majority of these non-Japanese pension funds are tax qualified and not EPFs, the new law does not apply to them.

Chase Investors Management Corp., New York, which has been operating in Japan since 1982, is not trying to attract Japanese pension assets through direct solicitation. For one thing, Chase prefers not to compete with its current Japanese clients, which include trust banks and insurance companies. Chase Investors executives also believe vying for Japanese pension assets would be an expensive proposition — and one that wouldn't adequately tap the firm's forte in dollar-denominated investing. "Some firms will be trying to compete as yen-denominated managers," said Lawrence F. Weber, managing director of Chase Investors Management in New York. "But we don't consider this to be our area of expertise. We are a foreigner in the tightly knit Japanese financial community."

Other managers, however, are not being dissuaded from positioning themselves in Japan. Those taking a long-term view believe, in time, their performances and client services will win over pension funds. In the meantime, they can try to attract alternatives, such as "tokkin" funds, composed of surplus corporate assets.

"Many of the existing managers, insurance companies in particular, have produced fairly low level rates of return and not provided good client services to Japanese pension funds," said Wallace P. Wormley, deputy president and chief investment officer of Prudential Investment Advisory Co. Ltd. in Tokyo. "We believe this provides an opportunity for a firm with a performance and client services orientation to differentiate itself."

He recognizes that attracting Japanese pension business will clearly take time. "In the first five years, we think tokkin and subadvisory business will be the larger part of funds we manage," said Mr. Wormley. "But starting from year five and going forward, we expect our pension assets to pick up as a larger percentage of the total. And maybe in 10 years, we expect that more than 50% of our business (in Japan) will come from Japanese pension funds." ■

Top 200

Continued from page 1

calls. Plan sponsors were requested to provide asset totals, investment mixes and other information for their pension plans as of Sept. 30. Where necessary, those totals were calculated through *P&I* estimates and use of the 1990 Money Market Directory of Pension Funds and their Investment Managers.

The profile section, which includes rankings, stories, tables and individual profiles of the Top 200 funds, begins on page 14.

The strong growth in assets overshadowed another year in which plan sponsor contributions were outpaced by benefit payments, a trend that started last year but accelerated dramatically this year (*see story on page 14*).

Mike Johnston, an actuary and partner with Hewitt Associates, Lincolnshire, Ill., said good market returns, combined with the limitations on deductible contributions to fully funded plans, should keep contributions at a stagnant pace.

"A year of very good market returns will mean contributions will probably be down next year," Mr. Johnston said.

The lower cash flow resulting from reduced contributions leads to more competition among investment managers for defined benefit accounts, sparking fee cutting and the increased use of performance-based fees, said Mark Scott, consultant for Wyatt Asset Services, San Francisco.

He said pension funds remain healthy because of their moves toward diversification and indexation.

Among the assets held by the Top 200 defined benefit plans, the most significant gains were in internal indexed management (*see story on page 14*) and international investments (*see story on page 16*).

Internally managed indexed equity assets grew a whopping 67.6%, to $69.2 billion. Even taking into account the Standard & Poor's 500 Stock Index return of 32.8%, the assets posted a 26.3% real growth rate.

"For one-third of the cost they can invest in-house," Mr. Scott said.

Internally managed fixed-income indexing grew at a stupefying 613%, to $16.4 billion from $2.3 billion a year earlier, and taking into account the Shearson Lehman Hutton Government/Corporate Bond Index return of 11.3%, the assets still grew 540%.

All told, internally managed assets among the Top 200 defined benefit plans grew 15%, to $490.8 billion.

International investing boomed as pension executives attempted to reduce risk through diversification and to join in on the long-term returns.

As of Sept. 30, $39.4 billion is reported invested overseas by the Top 200 defined benefit plans, up 42.8% from the $27.6 billion reported a year earlier.

International equity investments rose 55.7% to $32.7 billion, and adjusted for market growth, still posted a 27.2% gain. International fixed income among the defined benefit plans in the Top 200 rose only 5.2%, to $6.1 billion.

Adjusting for the Salomon Brothers World Government Bond Index return of 6.5%, international fixed income actually showed a slight asset decline of 1.5%.

Other asset classes among the Top 200 that showed significant asset gains, although lessened by market adjustments, include real estate, dedicated/immunized bonds and leveraged buy-out funds.

Real estate equity assets grew 23.8%, to $43.7 billion reported from the Top 200 defined benefit plans a year earlier, although the average allocation to real estate among the Top 200 defined benefit plans dropped slightly. Given a market return from the FRC Index for real estate of 6.7% for the year ended Sept. 30, real estate investment grew an adjusted 15.9% among the Top 200 funds.

Use of dedicated/immunized bond funds among the Top 200 rose an unadjusted 29.2%, to $34.1 billion, and leveraged buy-out commitments rose 28.6%, unadjusted, to $4.5 billion.

Mortgages and guaranteed investment contracts were the biggest losers in terms of percentages of assets in the Top 200 defined benefit plans. Mortgages dropped 11.2%, to $16.7 billion, while GICs and their cousins, bank investment contracts, dropped 51.3%, to $3.9 billion.

Gene Gochenour, president of GIC Inc., Beaverton, Ore., said the decline in the use of GICs and BICs likely is because pension executives "don't want to tie up their assets" in instruments returning 8%. "We still have a lot of plans around with 8.5% actuarial assumptions."

Guaranteed contracts made up the largest asset class among corporate defined contribution plans, accounting for 35.7% of the aggregate asset mix.

With new defined contribution plans being formed and existing ones growing, the outlook for the equity markets isn't rosy, because defined contribution plans invest much of their assets in fixed-income instruments.

"We're not going to see as much institutional money pumped into the stock market because of the rise of defined contribution plans," Wyatt's Mr. Scott said. "With more money going into defined contribution plans directed by participants toward safer investments, it could have serious ramifications for the development of capital in the future."

Plus, he said, defined contribution plans are leading the investment management industry to construct new commingled funds, an investment vehicle chosen by many defined contribution plans. "The separate account business is not growing very quickly." ■

Chase looks beyond Japanese pensions

NEW YORK — Although cool toward the possibility of directly managing pension fund assets in Japan, Chase Investors Management Corp. is hot on attracting other institutional assets from that island nation.

Already, Chase, which has been operating in Japan since 1982, has found opportunities managing U.S. dollar-denominated securities and U.S. real estate for Japanese trust banks and insurance companies. Last year, Chase Investors began offering in Japan enhanced corporate cash management services.

The latter affords an attractive alternative to the Japanese pension market, officials at Chase believe. Corporate "cash is increasing in Japan largely because of tremendous profitability of Japanese corporations, which also enjoy low-cost financing," pointed out Lawrence F. Weber, a managing director of Chase, New York. Moreover, the "size of the capital markets in Japan is not growing as rapidly as the assets are. So more of these corporate assets are being managed outside of yen-denominated instruments. And the tendency is to go into the dollar," he said.

Chase is addressing this opportunity in corporate cash management by offering managed and structured portfolios. Mr. Weber concedes his firm has lagged some of its competitors in seeking this business, but Chase's "very strong name in Japan" should help it "play catch-up."

Meanwhile, the firm hopes to continue attracting assets from Japanese trust banks and insurers. This way, it can indirectly benefit from the expected growth in Japanese pension assets.

Thus far, Chase's strategy has been to provide management of U.S. securities — such as growth or value stocks and mortgage-backed securities — and U.S. properties, areas where clients have less expertise.

"We recognize that our Japanese institutional clients will try to do as much investing as they can themselves. For instance, with the help of generally available information, they are able to select large-cap U.S. stocks or Treasuries," said Mr. Weber. "We try to complement their activities with our expertise in areas where they may lack the resources."

For example, in 1986 the firm began offering bond funds that are double-hedged against interest rate and currency risk. Last year, it also offered for the first time in Japan, a fund for investing in mortgage-backed securities.

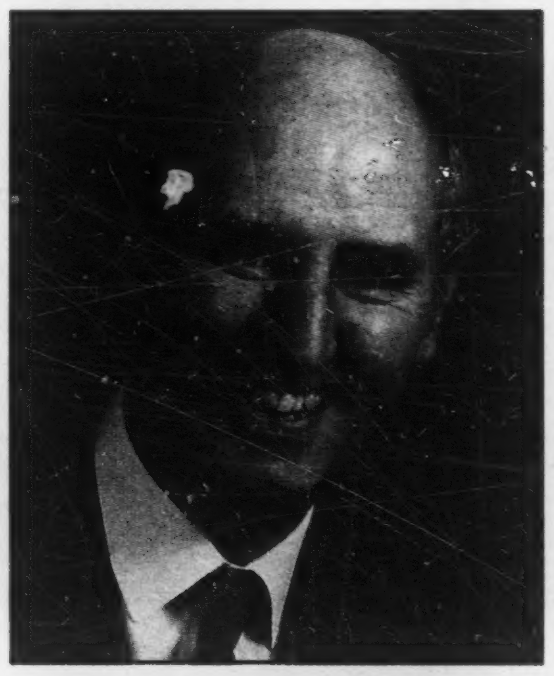
Looking ahead, the firm expects to offer "new, structured products being developed by our hedging group," said Mr. Weber, adding these should include "structured asset allocation products for equities, fixed income and currencies."

Chase's investment and marketing strategies have been bearing fruit. The firm counts as clients more than 50 of Japan's financial institutions, or about 70% of Japan's trust banks and life, fire and casualty insurers, said Mr. Weber.

With a total of $35 billion under management, Chase has attracted some $17 billion from international clients, including about $4.25 billion from Japan.

According to *Pensions & Investments'* foreign business survey (*P&I*, July 24), Chase ranked second among U.S. managers of foreign institutional assets, behind Citicorp Investment Management, New York. ■

— Margaret Price



Lawrence Weber says Chase's name is an asset in Japan.

Hartford fund receives option to purchase office building

HARTFORD, Conn. — The $400 million Hartford Municipal Employee Retirement Fund has an $11.275 million option to buy the Hartford Times Building, which would be leased to the city as office space, City Treasurer Denise L. Nappier said.

The City Council, in a unanimous vote, authorized City Manager John C. Burke to negotiate a rental agreement with the pension commission. The purchase of the building was contingent upon the council's vote, Ms. Nappier said.

Mutual Life Insurance of New York, the mortgage holder, must approve the deal before the pension fund can buy the building from North American Investment Realty Ltd. of East Hartford.

The option expires Feb. 1.

The pension commission would assume the current mortgage until September 1993, when a balloon payment would complete the deal.

A proposed lease agreement — which is negotiable — suggested rent from the city of $1 million annually and operating expenses of $500,000 a year, according to Ms. Nappier.

At the end of seven years, the city would have the option to buy the building from the pension fund or renegotiate two five-year lease terms, Ms. Nappier said.

Travelers Corp. leases space in the building, but the lease expires in 1991, according to Ms. Nappier.

To date, the Hartford pension plan's real estate investments make up about 0.2% of total assets, or about $800,000. ■

General Motors

Continued from page 1

showing GM as a solid outfit, which it is."

Summing up GM's problems, the proposal notes GM stock value has deteriorated from $56 per share in the mid-1960s to $43 today, while its asset value increased to more than $170 share.

GM has $168 billion in assets and only $27 billion in stock. Its assets include $9.1 billion in cash. Its market share also has deteriorated, with no recovery yet. And the Standard & Poor's 500 Stock Index outperformed GM by double from 1983 to 1989.

To boost the company's stock value, the group wants GM to create a $1 billion leveraged employee stock ownership plan; to require board members to own at least $100,000 worth of GM stock; to spin off some GM operations with stock to shareholders; and to pay out excess capital accumulation to stockholders.

The proposal also calls for selling GM stock to a broader range of investors and a two-for-one stock split, among other things.

The employees are asking GM to implement the restructuring plan or to include it in the 1990 proxy as a management-endorsed resolution.

The group has contacted a few GM institutional investors — whom Mr. Lyon wouldn't name. The institutions were asked to back the restructuring plan itself and to consider co-sponsoring it as a shareholder resolution.

Among GM's largest institutional investors are the New York State & Local Retirement Systems, the California Public Employees' Retirement System, the California State Teachers' Retirement System, the College Retirement Equities Fund and the Michigan Department of the Treasury.

A few institutional shareholders contacted by the group told *Pensions & Investments* they were studying the proposal, but did not want to be identified. GM is 43% owned by institutional investors.

The proposal would keep the pressure on a company whose performance has been slipping for years. 1989 earnings are expected to be dismal.

Two weeks ago, two large, long-term GM stock investors — the New York State & Local and the California Public Employees' systems — sought to underscore GM's declining performance by writing separate letters to GM Chairman and Chief Executive Officer Roger Smith and the rest of the board of directors. Both funds stressed their long-term commitment as owners of GM and a desire to build a constructive relationship with management.

Specifically, New York asked for information on the selection process for the next chief executive. California asked what standards would be developed to evaluate the performance of the new management, and what kind of policies were planned for an ongoing relationship with GM shareholders, especially institutional investors. The California pension fund suggested the board set up a committee to develop and oversee such a structure.

A review committee composed entirely of outside directors was formed last fall to evaluate candidates to succeed Mr. Smith, who is slated to retire later this year.

Mr. Smith and the rest of the board didn't respond quickly to the pension funds' letters. Neither fund received a written response, but a GM spokesman said one is being prepared. Mr. Smith spoke with the New York fund last week and is scheduled to speak with the California fund today.

Fund executives are perturbed their requests were ignored, but believe they made their point. New York holds more than 5.1 million shares of GM stock; California holds 6.2 million shares.

Edward V. Regan, the New York state comptroller and sole trustee of the New York pension fund, says he's not ruling out further action, but has none planned. He also believes it's unlikely the state pension fund will target other poor performing companies in this way. GM, he said, was a special case because it is such a well-known company.

California is considering its next step, said Richard Koppes, general counsel for the pension fund. He said he was heartened by calls from other shareholders and stakeholders who urged the pension fund to keep up the pressure on GM's board. California is looking at other laggards among its holdings, and may target some of them. Dale Hanson, chief executive officer of the fund, previously has cited Occidental Petroleum Corp. and United Airlines.

Not all institutional investors are pleased with the questions being asked of GM's board. Like many corporate executives, some institutional shareholders believe some activist pension funds are asking to be involved in corporate affairs in which they shouldn't have any say.

But the activists counter that argument by saying they are justified in communicating with the board of directors they elect and, that because they are long-term investors, they need to be well informed about the company. ■

Equities

Continued from page 2

showed the biggest increase in terms of percentage points, raising its equity allocation 29 points. Despite the prodigious move, the increase raised Phillips' total equity allocation to a mere 35% of its fund as of Sept. 30 from 6% on the same date in 1988.

Of the 68 corporate funds reporting comparative data, only nine others had total equity allocations lower than Phillips' current mix.

Rex Holsapple, Phillips' director-foreign exchange and pension funds, explained the big jump in equities as a move to a more typical equity mix.

"It wasn't that we were unusually bullish on equities," he said. "We just felt we were severely underallocated," the result of a 1986 defined benefit plan reversion that reduced the size of the remaining fund and left it heavily weighted in fixed income.

"The (equity) allocation still is really not that heavy," he said, adding that he was unable to say if Phillips will increase the allocation still further this year.

The $50 million American Stores Co. defined benefit fund showed the biggest decrease in terms of percentage points, chopping it by 40 points. The move cut American Stores' total equity allocation to only 11% of its fund, the smallest of any of the Top 200 corporate funds. Besides the defined benefit plan, American Stores has defined contribution assets totaling $1.8 billion.

The $2.39 billion Atlantic Richfield Co. defined benefit fund raised its equity allocation 20 percentage points, the largest equity increase of the very large defined benefit funds. The move raised Arco's total equity allocation to 74% of its fund and put it in second place as the fund with the largest equity allocation.

The most bullish of all of the funds is the $2.5 billion pension fund of Deere & Co., with a corpulent 77% of its assets invested in equities. That represents a modest two percentage point increase for Deere during the 12-month period.

The $1.4 billion FPL Group Inc. defined benefit fund reduced its equity allocation 12 percentage points, the largest decrease of the very large defined benefit funds. The move, nevertheless, left FPL, the parent of Florida Power & Light Co., with a still fairly normal equity allocation of 53% of its fund.

The Aluminum Co. of America had the smallest equity allocation of the very large corporate funds, at only 21% of its $2.66 billion defined benefit fund. That allocation is only slightly less bearish than the 17% of its fund it allocated in 1988.

The $9.23 billion Colorado Public Employees Retirement System raised its equity allocation 15 percentage points, the largest of the 57 reporting public funds in the Top 200. The move raised the Colorado fund's equity allocation to 46% of its fund.

Of the public funds, the largest decreases in terms of percentage points were by the $3.69 billion Kansas Public Employees Retirement System, the $17.95 billion Michigan State Employees Retirement System and the $23.5 billion Teacher Retirement System of Texas; each reduced its equity allocation seven points. The moves left the Kansas fund with 32% of its fund in equities; Michigan with 39%; and Texas Teachers with 31%.

The $3.48 billion Los Angeles Fire & Police Pension System raised its equity allocation 12 percentage points. The increase put its equity allocation at 66%, the highest of public funds. The public fund with the second highest equity allocation was the $11.18 billion Oregon Public Employes Retirement System with 59%, up two percentage points.

Of the six Taft-Hartley or jointly trusteed multiemployer defined benefit pension funds reporting asset mixes in the Top 200, five raised their equity allocations. The $2.24 billion Hospital & Health Care Employees National Pension Fund reported the largest jump in the period, at 23 percentage points. The move raised the fund's equity allocation to 55%, the highest of the multiemployer or union-oriented funds.

The $9.85 billion Teamsters, Central States, Southeast & Southwest Areas Pension Fund, was the only Taft-Hartley fund to reduce its equity allocation in the period. Morgan Stanley Inc., New York, the named fiduciary of the Teamsters fund, directed its 12 percentage point decrease. The move cut the Teamsters' equity allocation to 31%, giving it the most bearish equity allocation among the union-oriented funds.

The University of California had the largest equity allocation among the eight miscellaneous funds at 71% of its $11.77 billion fund, down three points from 74% in 1988.

The $1.58 billion fund of the General Board of Pensions of the United Methodist Church ranked second among the miscellaneous funds in equity allocation at 60%, up four percentage points from 1988.

The Annuity Board of the Southern Baptist Convention increased its equity allocation 11 percentage points, the highest increase of the miscellaneous funds. The move gave the Southern Baptists an allocation of 51% of its $822 million defined benefit fund.

Among the 68 corporate funds, 50 raised their equity allocations during the period, 15 lowered it and three left it unchanged.

Of the 59 public funds, 39 raised their equity allocation, 16 lowered it and four left it unchanged.

Among the eight miscellaneous funds, only the United Nations Joint Staff pension fund and University of California reduced their equity allocations. ■

Campeau

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lack merchandise.

But the long-term effect of the bankruptcies will be good for malls because Campeau will be out of retailing.

According to Hans Mautner, chairman of New York-based Corporate Property Investors, Robert Campeau planned to create five to 10 malls a year, anchored by Campeau stores.

"The notion was fanciful," Mr. Mautner said. "If one was looking for a silver lining, this might be it because it may cause a lesser number of malls to be created in the future," Mr. Mautner said.

The lack of Campeau's influence is more a positive than the bankruptcies are a negative, said Paul H. Saylor, a principal with Institutional Property Consultants Inc., Atlanta.

Other real estate industry professionals point out it was Campeau's debt, not poor sales, that led to the bankruptcy filing. Sales drive the value of a mall, noted Jake Young, a principal with Roulac Real Estate Consulting Group, Chicago.

Malls in second-tier cities could suffer the most, because that's where Allied and Federated would be mostly likely to close stores.

If the bankruptcies cause problems for pension funds, they are likely to occur through commingled funds, contends John Hart, president of Hart Advisors, a Hartford, Conn.

Direct investors usually buy major centers in major markets, where Allied and Federated would be less likely to close stores, Mr. Hart said.

Malls that are bought through commingled funds, however, are often in second-tier cities, he said.

"It would be the more marginal ones you would worry about," he said. But the losses would be mitigated by the pooling of the money in the fund, he added.

Nancy Lashine, a principal with The O'Connor Group, New York, disagreed with Mr. Hart's assessment of commingled funds. Because commingled funds have more capital, they can invest in larger properties, she said. O'Connor's Retail Property Trust, a $650 million commingled fund, invests in malls in major cities with top-rated department stores, Ms. Lashine said. ■

Axe-Houghton joins nuke arena

TARRYTOWN, N.Y. — Axe-Houghton Management Inc. has entered the growing nuclear decommissioning trust management field with a new twist on a familiar product.

Seeking to differentiate its services as a late entrant to the market, Axe-Houghton is offering fully insured municipal bond portfolios in its active management of nuclear trusts.

Nuclear decommissioning trusts are set up for the eventual decontamination of each of the country's more than 100 nuclear power plants when they reach the end of their useful lives, after about 40 years of operation. A directive of the Nuclear Regulatory Commission mandates trust funds be set up outside the utility's day-to-day control by July 1990.

Advisers have been scrambling to get clients, whose decommissioning trusts are expected to total more than $100 billion.

While insured bond portfolios are not new in and of themselves, Stephen J. Darby, Axe-Houghton's president, said he thinks they are new as applied to nuclear decommissioning trusts.

Municipal bonds are a main staple of the trusts, as current tax laws allow a deduction of contributions to trust funds that limit their investments to U.S. Treasuries, municipal bonds and certain certificates of deposit with banks and credit unions. A proposal in Congress would allow equities in these so-called qualified trusts, but even if passed, municipals are expected to continue to play a role because of the trust income tax implications.

The bonds will be insured through Municipal Bond Investors Assurance Corp.

"The insurance feature sets this service apart from others in the industry," Mr. Darby said. "It's a great safety net that not only elevates the bonds in a nuclear trust portfolio to a AAA rating, but importantly protects against default and downgrading of those bonds."

He said the insurance, and subsequent AAA credit rating, will also help a utility meet liquidity needs if an early decommissioning risk materializes. ■